

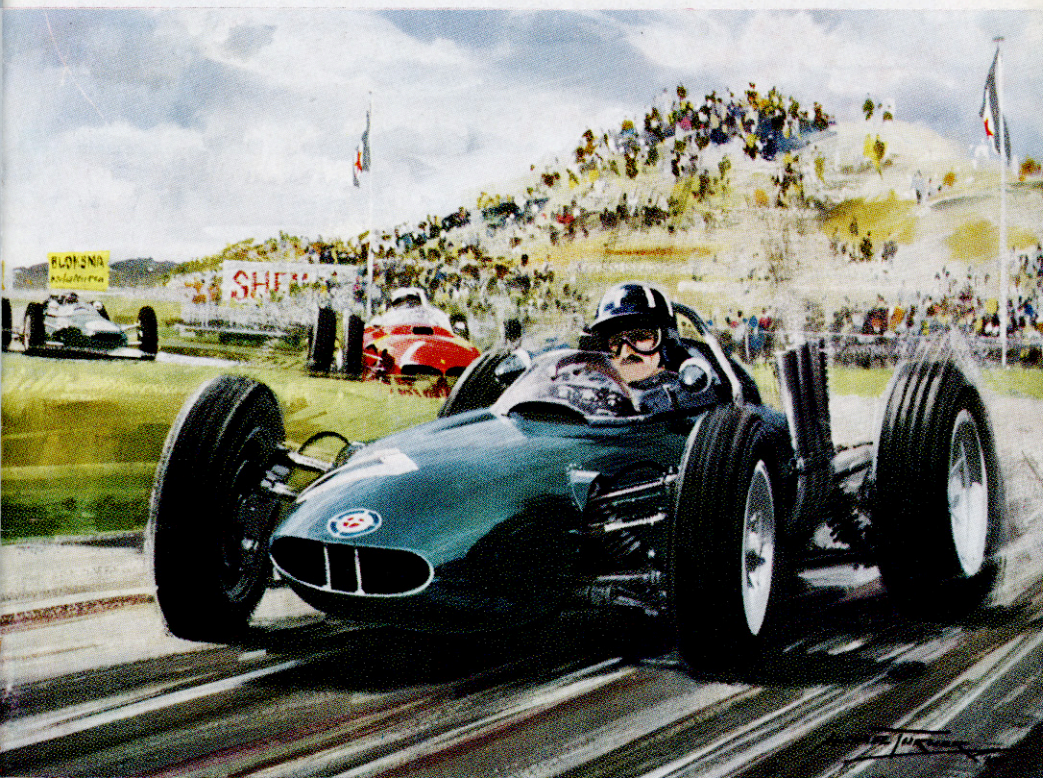
AIRFIX

magazine

For plastic modellers

ONE SHILLING MONTHLY

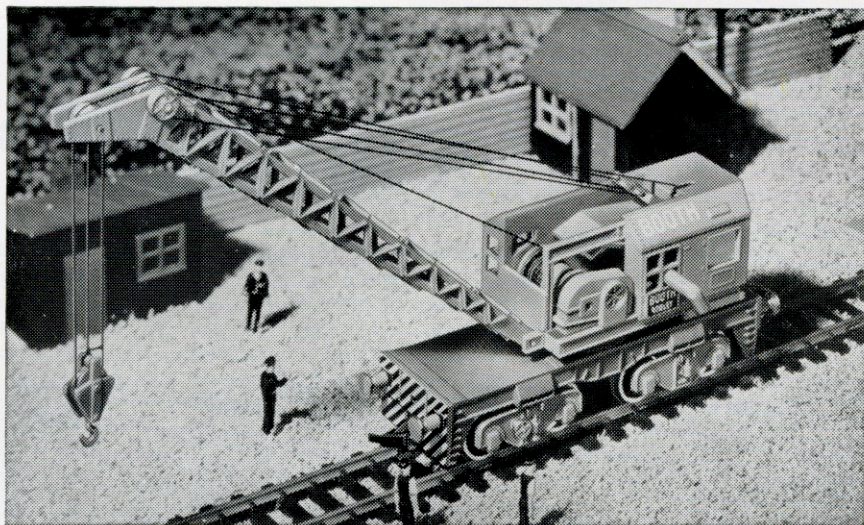
MAY 1963



IN THIS ISSUE

Drewry competition winners ★ Modelling methods with sheet plastic ★ Profile: The Lightning ★ New 25 pounder field gun from Airfix ★ Building a model hill-climb course

1!



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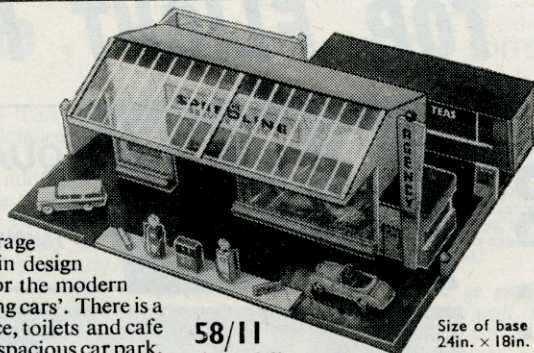
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AIRFIX

MAGAZINE

For plastic modellers everywhere

VOLUME 3

NUMBER 12

MAY 1963

ONE SHILLING MONTHLY

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From rails to roads

ONE of the most important events in the post-war history of British public transport was the publication, in March, of Dr Beeching's long-awaited report on the future of British Railways. The facts contained in the report are now well-known, but its implications are widespread.

The Government has now decided that it can no longer continue to subsidise (to the tune of many millions of pounds each year) this particular form of transport. But has it, we wonder, gone far enough into the alternative arrangements which the proposed pruning in rail services will necessitate?

Dr Beeching's report, we know, must have come as a bitter pill to many people, especially those who use the lines which are to be closed and those who rely on the railways as their source of livelihood.

The public has been assured that where rail services are suspended, they will be replaced by buses, a fair enough promise. How much better this report might have been received, therefore, if it had been supported by the announcement of a really big-scale programme for the modernisation of our inadequate road system which, when Dr Beeching's plans are implemented, looks like being choked beyond immediate salvation.

Road users have paid a fantastic sum in motor and fuel taxation over the years, only a small proportion of which has been used for road improvements. Now is the time to go ahead with a modern and ambitious road network. For many years, various people have campaigned for roads to be built over disused railway lines, a sensible proposition which is given added significance by the Beeching report.

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Cover picture

Famous motoring artist Michael Turner painted this colourful action picture of 1962 World Champion racing driver Graham Hill (BRM V8) on the way to winning the 1962 Dutch Grand Prix at Zandvoort. He is shown leading Phil Hill (Ferrari) and his great Championship rival Jim Clark (Lotus-Climax V8). The 1963 series of World Championship grandes épreuves begins with the Monaco Grand Prix on May 26.

IN THE AIR

BY ALAN W. HALL

THE last piston-engined bomber in the Royal Air Force has made its final sortie. On Tuesday, March 12, three Avro Lincolns from RAF Signals Command, stationed at RAF Watton, Norfolk, took off for a 530-mile cross-country journey over many of the bases that knew this aircraft in its prime.

I am sure that all enthusiasts will join with me in lamenting the passing of these aircraft, but we can be pleased with the fact that two of the last five aircraft of this type in service are going to be preserved by the Air Historical Branch of the Air Ministry at RAF Hullavington, Wilts. The other three are to be flown to No 23 Maintenance Unit at Aldergrove, Northern Ireland, where they will presumably go on the scrap heap.

The Lincoln has had a long and interesting history. It never saw operational service during World War II, as the first squadrons to be equipped were detailed to join Tiger Force destined to bomb Japan as VJ-Day arrived. Lincolns did, however, take part in anti-terrorist operations in Malaya and were used against the Mau Mau in Kenya.

Aircrew flying the Lincoln never took kindly to this derivative of the old faithful Lancaster. It was a heavy beast and rather underpowered. I can well remember flying in Lincolns myself, not long after the war, when taking part in some of the first air defence exercises to be held in peace time. The lumbering old Lincoln was hardly a match for the Meteors and Vampires that intercepted us coming in over the East Anglian coast and, although we had an armament of four 50 calibre machine guns in the nose and tail turrets, plus two 20 mm cannon in the mid-upper, we must have been 'shot down' many times in the final assessment of the exercise.

The Lincoln was replaced in operational squadrons by the British version of the B-29 Superfortress, or, as we called it, the Washington. Until the coming of the Canberra, and eventually the 'V' bombers, this country relied on the Lincoln as its main heavy bomber. Subsequently, Lincolns became squadron



One of the first privately-owned and operated DH 125s, this aircraft, G-ARYC, belongs to Bristol Siddeley Engines Ltd.

'hacks' and were relegated to training duties such as those at RAF Watton.

Looking up a few notes on the aircraft, I came across some interesting sidelights when Lincolns were used as bombing trainers at RAF Lindholme. My photograph shows one of these aircraft, WD143, taken in March 1960 at the time when most of them were being phased out of training duties there. This aircraft was, in fact, the last to fly from Lindholme and went to the scrap heap at Aldergrove around September 1961. They were all painted gloss black on their undersurfaces, had sea grey medium on top and a matt black anti-glare panel forward of the cockpit. The spinners in WD143 were blue.

★Details of the 1963 'Open Days' at Battle of Britain RAF stations have been released and show that there are only 15 places where the enthusiast can go. The complete list is as follows:

Bomber Command: Finningley, Yorks; Gaydon, Warwicks; Wyton, Hunts; Waddington, Lincs. **Fighter Command:** Leuchars, Fife; Middleton St George, Co Durham; Coltishall, Suffolk. **Coastal Command:** Aldergrove, Northern Ireland. **Flying Training Command:** Acklington, Northumberland; Biggin Hill, Kent; Ternhill, Salop. **Technical Training Command:** St Athan, Glam. **Signals Command:** Tangmere, Sussex.

The date for this year's Battle of Britain day is Saturday, September 14.

★The Netherlands authorities and the Philippine Government have agreed to the transaction between Philippine Airlines and KLM Royal Dutch Airlines for the take-over by KLM of the DC-8 which it has had on charter from PAL since August 1962. This will make the fourteenth DC-8 on the KLM fleet and it will be registered PH-DCR.

PH-DCB, another DC-8 of KLM,



recently completed over 10,000 hours flying time, the equivalent of five million miles or ten times to the moon and back. Since delivery to the airline this aircraft has averaged nine hours nine minutes in the air every day!

★Judging by the amount of publicity material I have received, the Biggin Hill Air Fair, to be held on May 2, 3, 4 and 5, looks like being one of the most important events during the season. Most of the international airlines, we are told, will be exhibiting and one of them, Swissair, is supposed to be bringing one of their new Convair 990s. How they are going to get this into Biggin Hill's rather short runway remains to be seen!

★Did you get the correct answer to my recognition poser last month? If not the answer is that the aircraft in the photograph was a Heinkel He64C—much modified. This aircraft was built by the Heinkel company in 1932 and was imported by the Air Council for slot and flap research by Handley Page Ltd in December of that year, registered as G-ACBS. It went under RAF colours in 1933 as K3596, and was transferred to the RAE only to take up its civilian registration again in 1936, before being flown out to S Rhodesia, where I saw it.

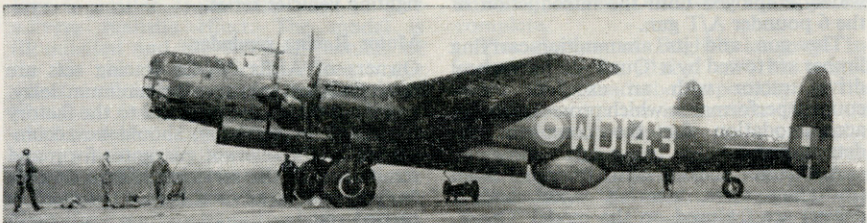
The Lindholme Lincoln, WD 143. This aircraft formed part of the Bomber Command Bombing School equipment in 1960 and was, in fact, the last aircraft of its type to be used by Bomber Command. It was broken up at Aldergrove in late 1961.

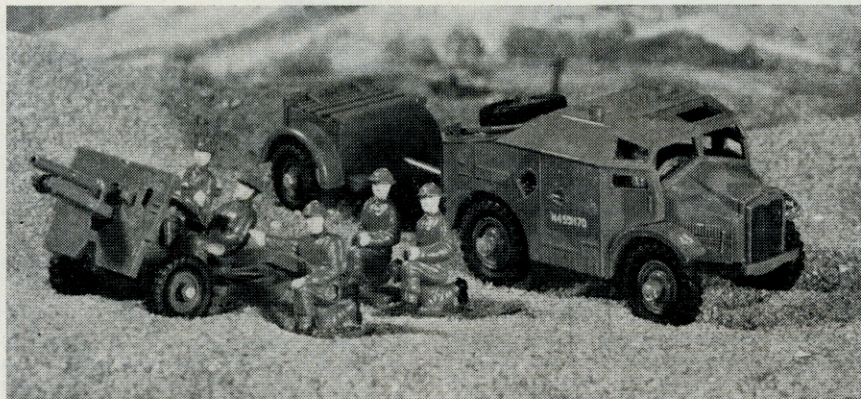
A reader in Manchester, Mr B. Robinson, sent us this rather fine photograph of a JU 87D which met its end in the Western Desert in 1942. Codes on the fuselage sides are S7+K.

Delivered to a Mr H. Perrem, it became VP-YBI but suffered greatly during the war as no spares could be obtained to keep it in flying condition. To overcome these difficulties, an engine was taken from a Tiger Moth, the undercarriage was a home-made affair and the tailwheel originally belonged to a Harvard. The cockpit was greatly changed from the coupé version of the original aircraft and this, I understand, came from one of the Fairchild Cornell trainers which were used for primary training in Rhodesia at that time.

In spite of all these modifications the old aircraft could still make a comfortable 90 mph and would top the 'ton' if pushed! It was finally retired in 1952 after a long and, I daresay, interesting history. Several readers wrote in about the picture we published last month. The best correct answer came from Mr K. A. Palmer, of Halstead, in Kent, who will receive a free Airfix kit of his choice.

★The order book for that delightful small jet, the DH 125, is growing. In addition to the substantial quantity ordered for the RAF as navigational trainers, individual aircraft have been sold to Bristol Siddeley Engines, a European charter company and several other buyers.





NEWS FROM AIRFIX

The world's greatest value in construction kits

A 25 pounder field gun for 2s

FOLLOWING the recent announcement of the Airfix tank transporter, Panzer 75 mm assault gun and Stalin tank models, another new military vehicle—a 25 pounder field gun—has joined the growing range of Airfix HO/OO scale fighting vehicle kits. Selling for 2s, this latest kit comprises 71 parts which assemble into a three-part model, consisting of the prime mover, the two-wheel limber, and the gun itself.

The 25 pounder field gun was the standard field equipment of the British Army throughout the Second World War, and many are still in use by the Royal Artillery. It has a range of 13,400 yards and can fire high-explosive, armour-piercing or smoke shells. The gun carriage permits maximum movements of 40 degrees elevation, five degrees depression, and a traverse of eight degrees. In emergency, a wheel-like firing platform can be used to give a 360 degree traverse, which greatly improved the gun's anti-tank role, in which it was widely employed until the introduction of the 6 pounder A/T gun.

The gun and its ammunition-carrying limber are towed by a 'Quad'—a four-wheel drive tractor with an excellent cross-country performance which provides seating accommodation for the complete gun detachment.

Authentic chassis and interior detail (including seats, steering wheel and a driver) are featured on the model 'Quad',

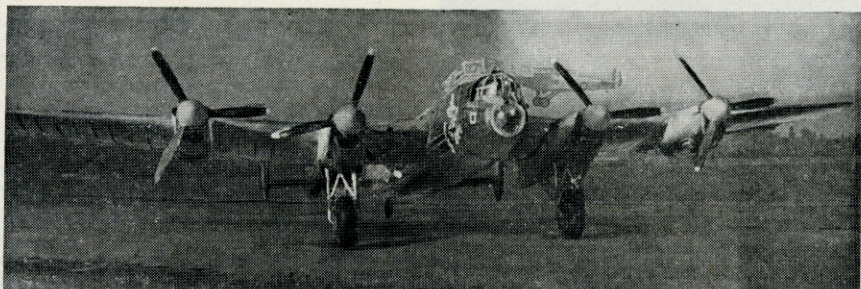
which has fully-revolving wheels and a spare wheel mounted on the roof. The limber and the gun, too, both have revolving wheels and the gun itself can be elevated and traversed in true-to-prototype fashion. The special firing platform is also reproduced and clips beneath the gun chassis, from where it is easily removed.

Besides the driver, five other crew members are included in the kit, representing the gun commander, the rammer, the gun layer, and two ammunition loaders. Full assembly and painting instructions are, of course, included with the kit, together with a sheet of transfers which enable the vehicle to be finished in authentic livery.

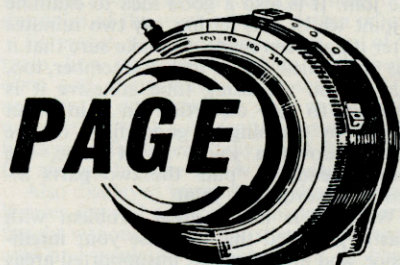
The completed model can be displayed in the travelling position or in action, complete with crew (as shown in our picture). It is especially suited for use with the Airfix HO/OO scale military figures, and also forms an ideal companion for other models in the fighting vehicles series.

Motor Racing reminder

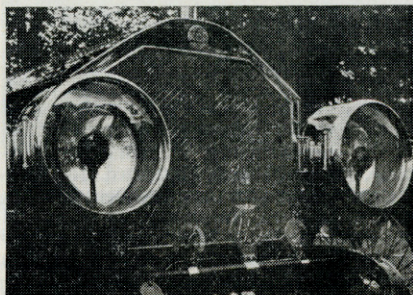
Owners of Airfix Motor Racing sets are reminded that, to ensure the minimum delay, any items which are returned to the factory for repair or servicing, should be accompanied by the relevant guarantee form and remittance. If the servicing charge exceeds 5s, you will be advised before the work is carried out.



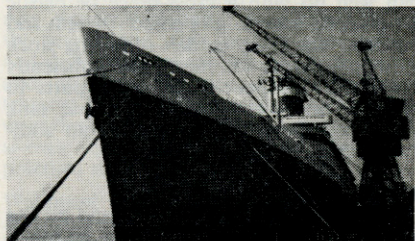
PICTURE



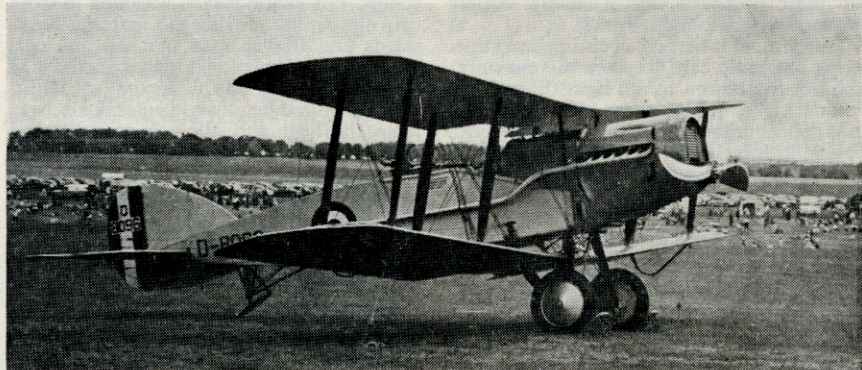
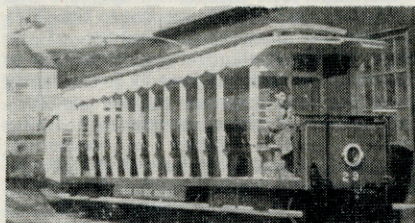
Picture of the month award goes to K. E. Landon, of Watford, who took this photograph (above) of a model Airfix Lancaster. He used a wide-angle lens and, during printing, double exposed the picture on to an airfield background.



Above: M. E. Rumney, of Downham Market, took this close-up picture of the headlamp and radiator detail of a 1907 MM. Below: Car no 29 of the Manx Electric Railway (which runs between Douglas and Ramsey) was photographed by D. W. Johnson, of Congleton.



Above: K. Riggs, of Newbury, submitted this shot of the liner *United States*, taken at Southampton. Below: This Bristol F2B (D8096) from the Shuttleworth Collection, was caught by the camera of K. L. Green, of Woodgate, at RAF Upavon in June 1962.



Working with sheet plastic

AS I have always considered it of more value to write about some specific modelling project, rather than to talk in general terms on a subject, I am taking the building of the Sentinel four-wheel shunter shown in the photograph accompanying this month's article, and will describe the various techniques and methods which I employed in building it from sheet plastic.

All marking out was done with a 2H pencil, as scoring with a scribe seriously weakens the plastic, which will always break cleanly along a scribed line if the material is subsequently bent or placed under any bending stress. For the whole of the superstructure, including the footplate, I used .02 sheet Plastikard. The footplate was cut out for the subsequent addition of a mechanism, the shunter as illustrated being non-working. The Kitmaster motor bogie suits the locomotive well and can be fitted with the minimum of fuss.

In cutting out the mechanism aperture I found it best to drill $\frac{1}{16}$ inch holes in the corners of the square to be cut out, and then to join up by cutting with a single-edge razor-blade. The mechanism aperture was cut before the footplate was cut to size. This reduces the chances of distortion of the sheet. To ensure that the now rather flimsy footplate did not get bent, I immediately built up the channel section solebars and cemented them in place. I found that a simple gluing or cementing jig helped considerably here, and throughout the model, to ensure that everything was square. This simply consisted of a dead flat piece of board with a square section piece of stripwood glued to it.

I also found it best when cutting long thin strips of plastic card to score the cut only, and not to attempt to cut right through. If you cut right through there is a real chance that the resultant strip will have a nice even bow in it. It is, however, quite easy to crack off the strip when it has been scored and the result will be flat, without distortion.

I mentioned in last month's article that the liquid cement should be applied with a fine brush. By this I do not mean a OO sable hair one, but rather one with a fine point. Indeed, it is quite useful to have a brush which will hold a quantity of the liquid cement and yet one which has a sufficiently fine point to get into inaccessible

corners. Always work from the back of a joint, or from the unseen or lesser seen side if you can.

When a long seam has to be joined, it is as well to tack the joint in one or two places to hold the two parts in position. After these tackings have dried sufficiently to hold everything steady, run a line of cementing fluid down the whole length of the join. It is also a good idea to examine a joint whilst it is setting, say two minutes after it has been made, to make sure that it has not 'pulled' out of true. Remember, too, that if you are using tube adhesive it is possible to get distortion in thin sheet plastic by running a good fillet of the cement down a joint. As it dries, the cement tends to 'pull' the two parts inwards towards the joint.

Warping is not a great problem with plastic provided that you use your intelligence, and any large flat unsupported areas can well do with a cross-brace of plastic strip set on edge to give some strength and rigidity. Not many models of rolling stock or motive power will have areas sufficiently large and unsupported by other parts to warrant this sort of treatment, but tank sides might well be stronger for an additional cross-brace set on edge.

Bending

The question of bending plastic, and getting it to stay in a bent position, is largely a matter of experience, and it is as well, before you start trying to bend right angles in a piece of intricate plastic which you have cut out and shaped, to practise on some scraps. For gentle bends, warming in front of a fire whilst moving the material backwards and forwards so that no one part becomes overheated will render it pliable in a general sort of way. It is vital to hold it at the required bend while you take it away from the heat and allow it to cool. For sharper bends it is perhaps best to find a piece of brass rod of the required radius, warm it gently over a gas ring and wrap the piece of plastic round it when it is almost cold again.

It is vitally important not to subject an area of plastic to too great a heat and, provided that you can hold the brass rod with reasonable comfort in your bare hands, this should be about the right temperature. Once again, you must hold the material

round the former until both have cooled and the plastic set again. This is a process which sounds terrifying and probably *is* the first two or three times you do it; but practice will make perfect.

Making holes

As I have said before, drilling is perfectly straightforward in this new material. For large holes it is perfectly possible to work round and round the pencilled outline with a modelling knife, with light pressure, until the hole is cut out. I do not advocate the use of leather punches in this material as they distort sheet plastic terribly, and there seems to be no way of curing the distortion once it is there. In the Sentinel loco the windows and the holes in the side casing for the ventilators were cut out by drilling in each of the four corners of each opening with a $\frac{1}{16}$ inch drill, and then cutting out with a modelling knife between. A piercing saw could have been used instead for this process.

All windows and ventilator openings in the side casing were cut out before the main outline of the casing was cut. As with the footplate, this minimises any distortion which might occur. If you fit glazing in the windows, it is better to secure the pieces of Perspex in place with Sellotape and not to glue them, so that there is no question of any additional distorting forces should atmospheric conditions make the plastic and the Perspex expand or contract at differing rates. To simulate the ventilators,

This (unfinished) Sentinel four-wheel shunter was modelled completely in plastic, as described this month.

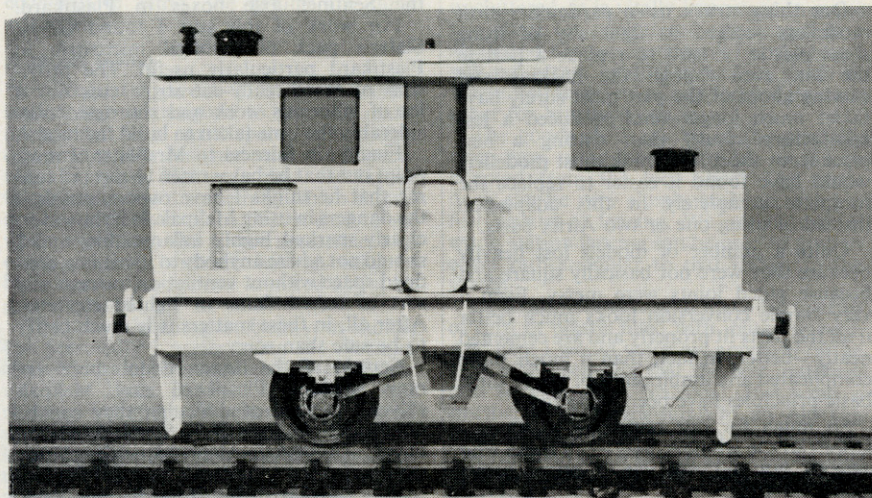
I glued a second piece of plastic behind the ventilator holes in the casing, and deeply scored cuts represented the ventilator louvres. It is quite possible, by using your modelling knife against a straight edge at an acute angle, to raise an appreciable flare in the plastic and get a very fair representation of a ventilator.

Whilst I do not think a leather punch is any good for making holes in plastic sheet, the circles of plastic removed from the punch itself are exceptionally useful. They can be used to build up all sorts of detail, and a case in point on the Sentinel shunter is the chimney, which is made up of a number of discs taken from various sized punches.

At the time of writing this article, Mr Slater informs me that he has been unable to find a source of supply for plastic rod in the smaller sizes, but he hopes to be able to supply it in due course. For the moment, therefore, we must either build up a square section of layers of plastic and then file and sand it into a round rod, or we must find cheap plastic kits as a source of this section for our use. The Airfix canopy kit has a number of rods which have appeared in various forms in my articles from time to time, and one such kit gives you a good supply. The supply position with regard to plastic tube is the same, so for the moment it will probably be necessary to use rolled gum strip.

In the Sentinel shunter the buffers were made up from plastic rod for the shanks from an Airfix canopy kit, the buffer heads were discs of plastic from a leather punch,

Continued on next page



DREWRY COMPETITION

The prizewinners

WE were pleased with the response to our contest and have enjoyed going through the entries to select the winners. On the whole, the standard was pretty good, but many entries suffered because the photographs submitted did not do justice to the actual models. We should have realised that this was a potential difficulty, because photographing small models is a real art. Unfortunately, none of the photographs entered was of sufficiently good quality for reproduction, so we have arranged for the winning model in each section to be photographed professionally and will include pictures of these two in our June issue.

We took age into account in the judging and the prizewinners are as follows:—**Senior section**—winner, P. Bridges, of Lincoln; runners-up, A. A. Southern, of Kingston-upon-Thames, and A. R. Gillespie, of Leicester. **Junior section**—winner, P. Guest, of Bath; runners-up, M. Witherden, of Upton, and D. Fennell, of Orpington. The two winners will each receive a cheque for £2 2s, while the four runners-up will be sent an Airfix kit of their choice.

Lack of attention to obvious details lost marks for quite a lot of competitors; the position of the exhaust (chimney) was a stumbling block, and some people made the Ruston LSSE have a jackshaft. Handrails made of over-thick wire lost marks for several people—they look very obvious when they are painted.

One thing struck us in particular: most modellers seemed to fight shy of using sheet plastic or card to replace a part in the kit, even though the hacking and carving about of the part must surely have taken much longer (and produced a less satisfactory result) than cutting a new piece from sheet. We think most modellers would have found it easier to replace the footplate completely in this adaptation instead of using one or two Airfix parts.

Quite a number of models lost heavily because they were not basically square and because glued joints were messy. Even a very simple conversion looks much better if all the parts fit properly and are cemented neatly—better, in fact, than a much more complicated and ambitious job, where these basic principles have been neglected.

So much for our criticisms. Congratulations to the winners, and to all those who entered but did not win a prize—better luck next time!

Plastic modelling—Continued

and the buffer stocks were made by wrapping gummed paper strip round the plastic rod of the buffer shanks. The buffer shanks were made long enough to protrude from the stocks so that they could fit into holes drilled in the plastic buffer beam and could be cemented in place. Mekpak or other plastic jointing fluid, of course, does not work satisfactorily with materials other than plastic, and if you have to make a joint between plastic sheet and, say, card it would be better to use UHU. For the smaller details on the Sentinel shunter, a good rummage through the bits box from Airfix and Kitmaster cast-offs produced one or two useful items. The whistle was made by turning down a small boiler fitting from a Kitmaster loco.

It is perfectly possible to turn plastic using a hand brace fixed in the vice or by using a lathe, providing the material is not allowed to overheat by trying to take too deep or too long cuts in it. Probably most people will use needle files for the turning.

The underframe detail

As can be seen from the photograph, the axle box detail was built up with various pieces of plastic strip, and with circles of plastic from the leather punch. There is nothing particularly difficult in this work, which requires patience and a reasonably steady hand. In my case, I removed the die-cast outside frames on the Kitmaster motor bogie (the motor bogie has inside bearings, so the outside frames are merely dummies) and built up reasonable representations of the Sentinel axle boxes in Plastikard.

For work of this sort I found G. N. Slater's pack of assorted microstrip in Plastikard particularly useful. The provision of these ready-cut strips cuts out a lot of laborious work and shortened considerably the time taken to build the model.

Finally, in fairness to Mr Slater, I must point out that he has written to me and told me that he thinks I have over-emphasised the dangers in using Mekpak. It is, however, clearly marked highly inflammable, and I should not advise anybody to use it in a confined space without ventilation, or near any sort of naked flame or lighted cigarette. After all, in these matters it is much better to be safe than sorry.

Certain of the larger model shops are now stocking Plastikard and Mekpak solvent. In case of difficulty, they can be obtained direct from G. N. Slater, 6 Dalveen Drive, Timperley, Altrincham, Cheshire.

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SOME NEW BOOKS

Reviewed by
THE EDITOR

Sunderland story

FLYING BOAT, by Kenneth Poolman. Published by William Kimber Ltd, 46 Wilton Place, London, SW1. Price 30s.

WHO can forget the Sunderland? Whether operating on a Sunderland squadron or merely as an interested bystander, no-one can forget the stately majesty of these great flying boats in both peace and war.

Kenneth Poolman's work aptly describes the difficulties and shortcomings of their operational life, and brings an avid description to illustrate the diversity of the tasks that Sunderland aircraft performed. Full details are given, for example, of the Sunderland's part in the expeditions to the Arctic in 1952, their war against the U-boat and the operations from Havel Lake in Berlin during the Airlift.

Now that we are lucky to have one aircraft of the type permanently stored in good condition at Pembroke Dock, it is fitting that this book should be published to complete the story.

On the right lines

RAILWAY PICTURE GALLERY, by John Adams and P. B. Whitehouse. Published by Ian Allan Ltd, Craven House, Hampton Court, Surrey. Price 25s.

THE 96 pages of this book contain an excellent selection of old and new railway photographs from well-known railway photographers in many parts of the world. Most of the pictures are of considerable artistic appeal, and their subject matter is no less interesting. Brief captions to the illustrations are given at the end of the book.

Some of the photographs are familiar, some are new, but the attraction of the book is in the large size of the illustrations, including a few double-page spreads. It is the sort of book that can be taken down from the book-shelf at any time to give hours of pleasure over very many years. It would make an excellent gift to any railway enthusiast, whatever his particular interest in the subject may be.

Hot stuff!

FIRE ENGINES, by M. G. Rolfe. Published by Ian Allan. Price 2s 6d.

THIS book contains a wealth of information, not otherwise readily available or generally known, about these most familiar vehicles. The 64 pages include a host of illustrations, mainly of current types but some of historic interest, and the text covers

such aspects of the subject as fire engines today, livery, types of appliances, fire engine construction and a list of fire brigades throughout the country. To all those people who must stop to see a smart red fire engine dashing to answer an emergency call (and this must mean everybody) this book will be of absorbing interest.

Fascinating biography

TO KNOW THE SKY, by Prudence Hill.

Published by William Kimber Ltd, 46 Wilton Place, London, SW1. Price 30s.

THIS is the story of Air Chief Marshal Sir Roderic Hill, told by his daughter in a lively and interesting way. 'Roddy' Hill was best known as C-in-C Fighter Command at the end of the War, during the period of the flying bombs and V2s. He brought with his unbounding enthusiasm for flying a sound understanding of engineering and the knowledge of 'what went on under the bonnet' from the first time he entered the service in the first World War, up until his retirement in 1948 as Member of the Air Council for Technical Services.

'To know the sky' is a fascinating story not only of the man but of the rise to prominence of the Royal Air Force. The days in the desert on the early mail runs through Iraq, service with the Oxford University Air Squadron and the war years in America on the Purchasing Commission are amongst the many and varied facets of the life of this officer which are most admirably told.

By the right, number

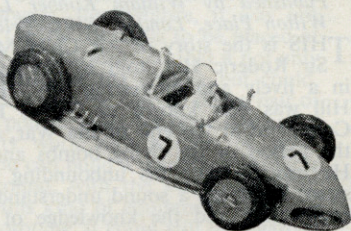
ABC LONDON TRANSPORT RAILWAYS.

Published by Ian Allan Ltd. Price 2s 6d.

THE latest 1963 edition of *ABC London Transport Railways* is now available with information correct up to December 1, 1962. The numbers are given of all electric multiple-unit cars in service, or on order and the stock is fully described. LT stock is not numbered in one continuous sequence, so the different types of stock are grouped according to their broad classification, such as Tube Stock, 1938 Surface Stock, pre 1938 District Stock, Metropolitan Stock, etc. Full details are also given of LT service locos and rolling stock, electric train headlight codes, depots, etc., and there is a reproduction of the well-known LT diagrammatic map of the system. The 72 pages include a generous selection of photographs.

WHEELSPIN

by Bert Lamkin



BY way of a change, this month's article is devoted to an entirely separate aspect of miniature motor sport—hill-climbs. For those modellers whose available space is somewhat limited, a hill-climb layout would prove particularly appropriate. If you use a fair amount of ingenuity, the result can be quite interesting, and provide something more unusual in the way of competition.

The layout shown this month is based once again on Airfix track, with the gradients well within the cars' capabilities. And the wheelspin when starting on a 1 in 4 slope is quite impressive!

It will be noted that the curved sections of the layout are kept level, which is done to simplify construction. Thus, starting from the baseboard, a series of platforms of varying heights can be fitted to coincide with the positions of the bends. Thick card or hardboard can be used for the platforms, with strip seven inches wide to form the linking straights.

I should mention here that I am assuming a baseboard is always used, so that, in the

event of the track having to be cut, and thereby losing the normal section joint, the shortened pieces are screwed or glued to the base.

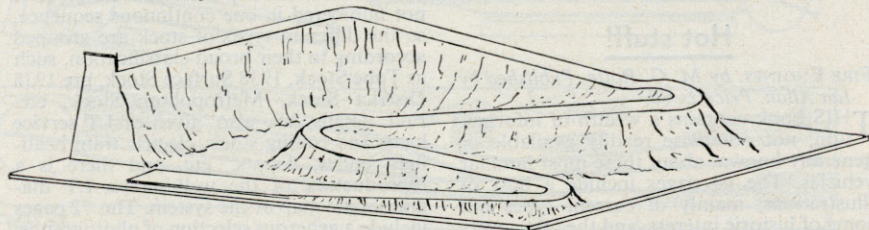
The straight sections can be supported by pieces of hardboard, cut to the required gradient and glued underneath. EVO-STIK is very useful for this purpose. When fitting the sub-bases, make sure that the transition from level to gradient is very gradual; sudden angles are not conducive to smooth running. In fact, time spent on the preparation is well worth while. The Airfix track will follow the angle, if cut through the webs underneath: then slightly heat the section before fitting. Care will be needed with this operation because the 'T' section conductor has to bend as well. So if you are not too keen on that idea, it would be best to keep the track sections rigid and build accordingly.

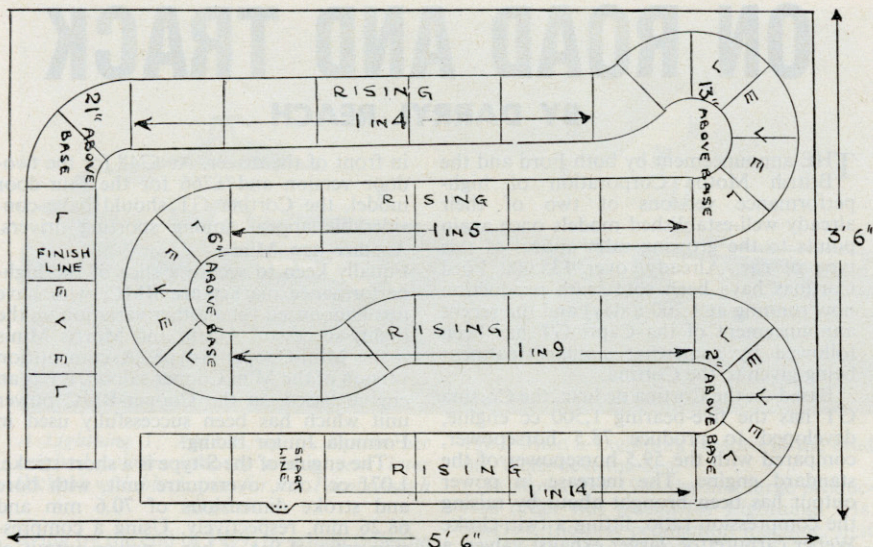
The question of maximum gradient to be used is largely governed by a car being able to restart if stopped. I have found that 1 in 4 is reasonable, and consistent with actual hill-climbs. Most hills gradually increase in steepness as one climbs, but for modelling purposes this could be varied. Obviously the layout must be adapted to fit the space available.

When the sub-bases have been fitted satisfactorily, the track sections are laid, using the same method as previously described, *ie* small screws through the side slots. At this stage it is as well to check the electrical conductivity, either by trying a car, or with a voltmeter. Barrier fences are then fitted on the curves, and you can begin landscaping the layout. This is a bit easier than with race tracks as the cloth—cotton pieces from an old sheet—can be glued to the track edge and allowed to fall in a fold between adjacent sections on the inside, and fastened in a slope from track to baseboard on the outside. The sketch illustrates the scheme.

When painting the 'ground', bear in mind that grass seldom grows on vertical surfaces. One could very well think in terms of

The hill-climb in relief, showing the landscaping. Airfix fencing barriers would be fitted to the bends.





a rocky strata with a very colourful effect. In this case there is usually a number of dislodged lumps of rock lying at the base of cliffs and these could be simulated by using small pieces of plaster or chalk, glued in position before painting.

Foliage will depend on the sort of hill made, and is usually confined to pockets of earth that would be left after road making. It would be rather startling to see an 80-foot oak tree growing out of a couple of square yards of soil! So I refer the reader to nature again—and no high gloss paints . . .

In use, the hill-climb would normally call for some timing device. Bearing in mind the relatively short distances we have, using ordinary stop watches is difficult. An idea worth pursuing is one that I have used on model railways. That is to modify a small clock to increase the hand speed considerably. In the case of my railway, it records one hour in 20 minutes of actual time. This would make the 'seconds' easier to see—in fact the clock face could be replaced with a home-made dial giving the required divisions. A further development of the clock device would be to make the cars start and stop the timing automatically, thus recording their own 'time'.

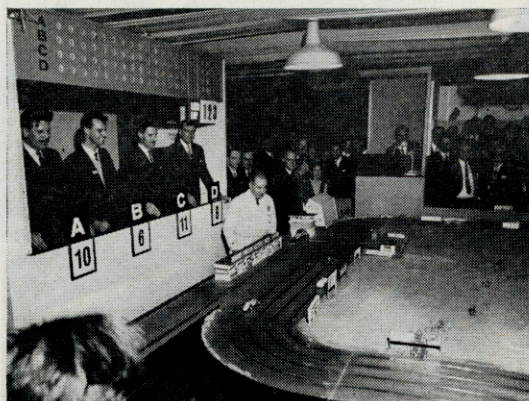
If clocks are not available, or are considered too complicated, the climbs could be contested with cars in pairs, racing each other. This would produce some hair-raising moments on the bends! One small point you should not overlook is that if you use the type of layout shown, a small piece of sponge rubber glued to the face of the wall at the finish will prevent bent

Above: This sketch plan shows how quite an interesting climb can be laid out within a very compact space. Note that the finish line is conveniently close to the start. Below: The miniature racing circuit is always a popular feature of the BRSCC's annual Racing Car Show. Our picture shows the finalists contesting the 1963 Guards Trophy, under the watchful eye of Bert Lamkin. Left to right, the drivers are Warwick Banks, Mike Pendleton, Graham Hill (the eventual winner) and Jack Sears.

motors. A rule governing all miniature motor sport should apply, namely that cars leaving the course completely are deemed to have retired.

With regard to the machinery, there are classes for all types of vehicles on climbs—so you can have plenty of scope for 'specials'. A two-motor four-wheel-drive 'beastie', for instance. From full-size practice, you could also feature double rear wheels—cutting the hub boss from Airfix rear wheels and gluing to the outside of the cars' wheels.

To quote that well worn maxim: 'You're on the up and up'!



ON ROAD AND TRACK

BY DARRYL REACH

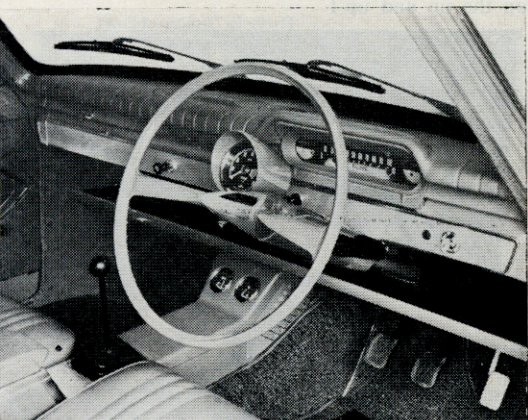
THE announcement by both Ford and the British Motor Corporation of high-performance versions of two of their already well-established models once again points to the growing sales appeal of this type of car. Already, over 135,000 Ford Cortinas have been sold (with production now running at 1,200 a day) and the recent announcement of the Capri GT has been followed by somewhat similar treatment being given to the Cortina.

Based on the Cortina de luxe, the Cortina GT has the five-bearing 1,500 cc engine, developed to produce 78.5 horsepower, compared with the 59.5 horsepower of the standard engine. The increase in power output has been brought about by raising the compression ratio, fitting a twin-choke Weber carburettor, larger exhaust valves, a four-branch exhaust manifold and modifying the camshaft.

Apart from the addition of GT badges on the rear quarter panels, there is nothing to distinguish the Cortina GT from the de luxe model. But on the road, the GT version has a considerably improved performance. Ford claim a maximum speed of 90 mph, a 0-60 mph acceleration time of 13.2 seconds, a cruising speed of over 80 mph and a touring fuel consumption of 30 mpg.

To enable full use to be made of this increase in performance, the GT has 9½ inch disc brakes on the front wheels and stiffened suspension. Inside the car, there is an attractive centre console housing the short remote gear lever for the four-speed all-synchromesh gear box, and also carrying an oil pressure gauge, an ammeter, a glove box and an ashtray. A rev counter is another extra instrument—mounted directly

Smart centre console of the Cortina GT houses extra instruments and the remote gear lever. Note the rev counter just above the centre of the steering wheel.



in front of the driver. At £748 for the two-door version and £766 for the four-door model, the Cortina GT should have considerable appeal among sporting drivers.

Another new Mini

Equally keen to secure a slice of the high-performance market are BMC, who have just announced yet another variation on the highly-successful Austin and Morris Minis—the Mini-Cooper S-type. A competition version of the Mini Cooper saloon, it has an engine based on the Cooper-BMC power unit which has been successfully used in Formula Junior racing.

The engine of the S-type is a short-stroke, 1,071 cc, ohv, oversquare unit, with bore and stroke dimensions of 70.6 mm and 68.26 mm, respectively. Using a compression ratio of 9:1, it has a power output of 70 horsepower at 6,000 rpm, compared with the 55 horsepower at 6,000 rpm of the ordinary Mini Cooper which, incidentally, the S-type does not replace. To enable the S-type's engine to withstand continuous high-speed running, it has special valve gear and a strengthened three-bearing crankshaft. Alternative sets of gear ratios are available (depending, for example, upon whether the car is to be used for racing, rallying or fast road work) and the clutch has also been modified to withstand the increased power output.

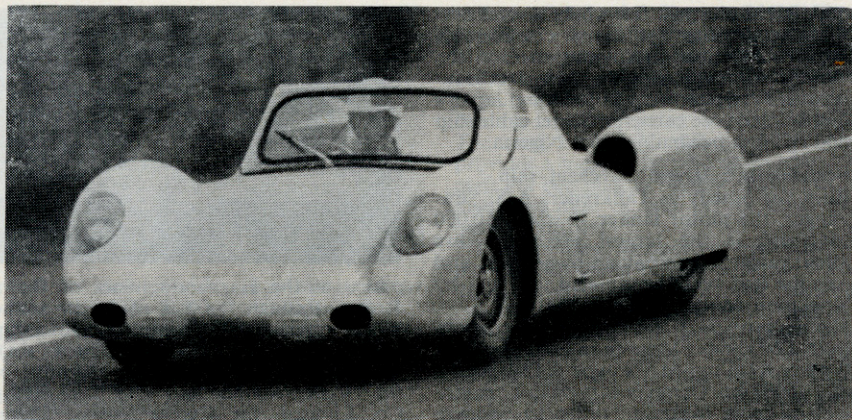
Apart from engine modifications, no structural changes have had to be made to the Mini's body or suspension, which speaks well for the soundness of the basic design. But to provide safer stopping power from the higher speeds of which this model is capable, larger diameter (7½ inch) disc brakes are fitted to the front wheels, while there is also a booster to reduce pedal pressure.

From the outside, the S-type is identical to the ordinary Mini Cooper, except for an 'S' motif on the bonnet and boot. Total price is £695.

Faster Elf and Hornet

Performance increases have also been announced for two other BMC Mini models—the more luxurious Riley Elf and Wolseley Hornet. These two cars are now fitted with a 998 cc version of the BMC 'A' type engine (in place of the former 848 cc unit) which develops 38 horsepower at 5,250 rpm, an increase of four horsepower over the smaller unit.

The extra power and capacity have been



Californian Richie Ginther tries out the Rover-BRM at Le Mans in preparation for the 24-hour race there in June. He will share the wheel then with Graham Hill, who in practice averaged 107 mph for an hour's non-stop testing.

obtained by increasing the bore and stroke of the 848 cc engine. In fact, the 998 cc engine uses the bore size of the 1,098 cc Morris 1100 engine, with the crankshaft throw of the obsolete 948 cc Minor 1000 engine. Top speed of the Elf and Hornet has been increased to nearly 75 mph, with a negligible increase in fuel consumption, and this extra performance is matched by more powerful brakes. Prices of the two models remain unaltered.

Rover-BRM try-out

Brief mention was made last month of the Rover-BRM turbine car which will be competing in this year's 24-hour race at Le Mans on June 15/16, with the chance of winning the special prize of nearly £1,800 for the first turbine-powered car to complete the race at an average speed of just over 93 mph. During the traditional preliminary practice week-end at the circuit in April, the Rover-BRM had a chance to show its paces—and a pretty convincing demonstration it gave.

World Champion Graham Hill averaged 107 mph for a full hour's testing, while Californian Richie Ginther (who is to share the wheel with Hill in June) put in one lap at over 111 mph. In all, the car covered 46 laps of the circuit and averaged just over 7 mpg of kerosene.

The car requires an entirely different driving technique (it has only one forward, and one reverse gear, and there is no engine braking with a turbine) but the two drivers were quite impressed with the way it performed. If it maintains this speed and

reliability during the race, the Rover-BRM will stand a fine chance of collecting the special award, though of course it will hardly be a challenger for outright victory.

During the Le Mans practice week-end, John Surtees (who this season is driving for the Ferrari factory) lapped the 8.36-mile circuit in 3 minutes 45.7 seconds, a speed of 133.3 mph, at the wheel of a 3-litre Ferrari sports car. This is over 11 seconds faster than the existing lap record, so this year's race looks like being full of excitement.

Economy motoring

The recent Mobil Economy Run proved something of a BMC benefit. Cars from this company won all four classes in what was generally voted to be the toughest Run yet held in Britain. The route covered almost 1,100 miles, and the 37 competitors were hard pressed to maintain their stipulated 30 mph average speed over the hilly and twisty English and Welsh roads, with head winds at times reaching over 50 mph. Torrential rain also made the going even more difficult in the early stages.

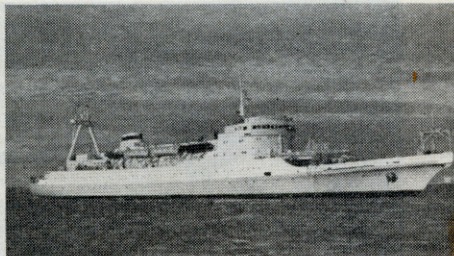
Probably the most remarkable performance of all was the 34.40 mpg returned by a 3-litre Vanden Plas Princess, driven by 'King of economy' George Kendrick, which won the over 2,000 cc class. First in the 1,501 to 2,000 cc class was a Morris Oxford, entered by Dr. P. T. Walker and J. Lowrey, which averaged 41.09 mpg.

Winner of the 1,001 to 1,500 cc class was an MG 1100 crewed by Mr and Mrs A. Hill, with a figure of 44.61 mpg. An Austin Mini driven by M. Gething and A. Curran averaged 53.93 mpg to take the 500 to 1,000 cc class. These astonishingly good fuel consumption figures show just what can be achieved by careful driving of a well-prepared motor car.

DURING the past few weeks several new foreign ships of some considerable interest have made an appearance on the world's sea-lanes. Among these are Scandinavia's largest merchant ship, Japan's first sulphide ore carrier, a Soviet cable ship and the first newbuilding for Nigeria.

Scandinavia's largest merchant ship

Built for Smedvigs Tankrederi A/S, Stravanger, the motor tanker *Vestalis* (60,050 tons dw) is the largest merchant ship afloat under Scandinavian ownership, and was the first vessel completed this year by Kockums Mek Verkstads A/B, Malmö. She is propelled by the first European-built 12-cylinder large-bore engine of any type, a Kockum-MAN type K12Z engine of 21,600 bhp. Cargo is carried in 12 centre and 12 wing tanks; in order to improve the ship's strength and to minimise stern vibration the two longitudinal cargo bulkheads have been extended through the whole engine-room. This arrangement permits the space between the bulkheads



mined at the Hanazono mines of Dowa Kogyo, through the Sea of Japan to the Kowa refinery. The vessel, a motorship named *Kowa Maru No 2* (2,867 tons dw), was built at the Mukaishima shipyard of the Hitachi Shipbuilding and Engineering Co., Limited, for Kyowa Sangyo Kaiun KK, Osaka.

She has a length oa of 269 ft, a moulded breadth of 40 ft 8 in, a moulded depth of 21 ft and a designed full-load draught of 18 ft. Her main propulsion unit was built by

SHIPPING NOTES by A. J. Day

and the shell to be used for bunker, settling, lubricating oil, feedwater tanks and the like.

The *Vestalis* has a total cargo capacity of 2,669,750 cu ft and a ballast capacity of 406,760 cu ft. The principal dimensions are: length oa, 775 ft; moulded breadth, 109 ft; moulded depth, 53 ft 3 in; and draught, 39 ft 11½ in. During trials, in the loaded condition, the ship attained a speed of 17.5 knots.

Japan's first sulphide ore carrier

Japan's first sulphide ore carrier was specially constructed to transport ore,

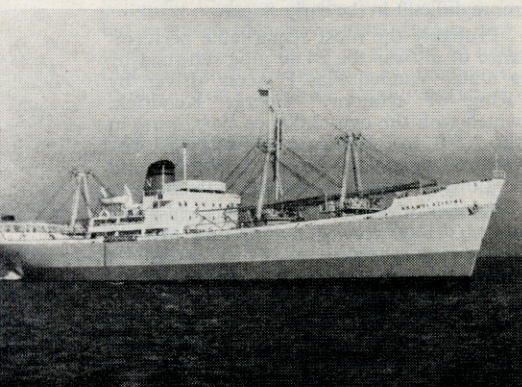
the Niigata Engineering Co., Limited, Niigata, and consists of an eight-cylinder oil engine of 1,800 bhp, which provides the ship with a maximum speed of 13.8 knots.

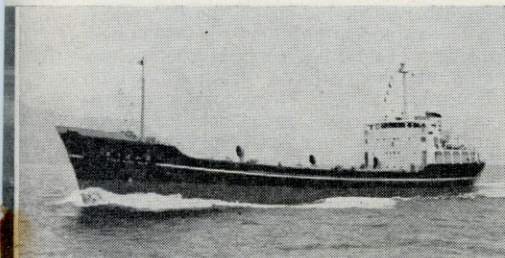
A Soviet cable ship

I have mentioned cable ships in these articles on one or two previous occasions, but the delivery of the *Ingul* (5,900 tons gross) affords me the opportunity of introducing a Soviet vessel into the series. The *Ingul* is the first of two diesel-electric cable ships ordered for the USSR and was delivered a few weeks ago by Wärtsilä-koncernen A/B Sandvikens Skeppsdocka of Helsinki. Her sister-ship, the *Jana*, was launched last November and is expected to be delivered this summer.

The main dimensions of the new cable ship are: length oa, 427 ft 10 in, extreme breadth, 52 ft 2 in; and a draught of 22 ft 5½ in. As with her sister-ship, she is specially strengthened for navigation in ice, and is fitted with underwater television for operation at depths down to 900 m. The cable machinery installed in the vessel can undertake the laying, picking up and repair of a multitude of various rigid and flexible repeaters. It was designed and constructed by Submarine Cables, Limited, of England,

The NNAMDI AZIKIWE (9,500 tons dw), the first vessel ordered and constructed for Nigerian ownership.





Left: A Russian cable ship, the *INGUL*, a motorship of 5,900 tons gross. Right: Japan's first sulphide ore carrier, the *KOWA MARU NO 2* (2,867 tons dw).

with whom the builders have completed a consulting contract.

Primary propulsion power for the *Ingul* is provided by two Wärtsilä-Sulzer 6MH51, non-reversible, six-cylinder, trunk motors of light construction which are directly coupled to dc double-rotor generators. Each motor develops continuously 2,470 hp (metric) at 350 rpm.

Nigeria's first newbuilding

The first vessel actually constructed for Nigerian ownership is the cargo motorship *Nnamdi Azikiwe* (9,500 tons dw). She was built to the order of the Nigerian National Line, Limited, at the Neptune yard of Swan, Hunter and Wigham Richardson, Limited, Newcastle-upon-Tyne, where a sister-ship is also on order. The *Nnamdi Azikiwe* has five cargo holds with deep tanks below No 3 'tween deck for carrying vegetable oil, Latex, glycerine, dry cargo or water ballast, and is fitted with MacGregor hatch covers.

Rigged with three steel bipod masts and derrick posts, the vessel has a length oa of 465 ft, a moulded breadth of 63 ft and a moulded depth of 38 ft 6 in to the shelter deck. Her cargo-handling equipment ranges from five-ton derricks to one of 50 tons. The main propulsion machinery of the *Nnamdi Azikiwe* consists of a six-cylinder Swan, Hunter-Sulzer oil engine designed to give a maximum continuous service power of 6,100 bhp at about 122 rpm.

New design for landing craft

The prototype of a new landing craft, for operation with the assault ships building for the Royal Navy, was accepted from her builders by the Amphibious Training Unit, Royal Marines, Poole, in March—one of two being built by Vosper, Limited, Portsmouth, and designed by them in collaboration with the Admiralty. These landing craft will each carry two Centurion tanks

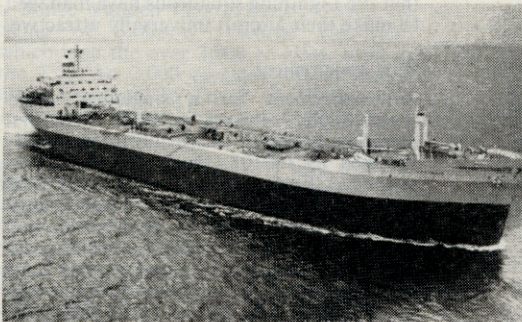
The motor tanker VESTALIS (60,050 tons dw), Scandinavia's largest merchant ship.

and are fitted with Kort rudders. These consist of a swivelling ring surrounding each of the two propellers, and replace conventional rudders. The Kort rudders produce more precise steerage and control when the landing craft are going ahead or astern. The ring enclosing each propeller also provides a measure of protection when the craft are beaching in shallow water, during disembarkation or recovery of tanks and heavy transport.

Paxman diesel engines are used for propulsion, the shafts being geared by a Vee-drive to enable machinery to be placed as far aft as possible. This provides a clear well for tanks and heavy transport which will be carried in the new assault ships. The design of these new craft introduces new standards of landing craft stability with a loaded displacement of 176 tons—the result of exhaustive tank trials at the design stage.

HMS Hampshire, a County-class guided missile destroyer, was commissioned during March at the Clydebank shipyard of John Brown and Co (Clydebank), Limited. The *Hampshire* is the second ship of the class to complete. The first was *HMS Devonshire*, commissioned last November, and four more are under construction. County-class destroyers have a standard displacement of over 5,000 tons, a length of 520 ft and a beam of 54 ft.

Their armament consists of one Seaslug guided missile system incorporating a twin missile launcher, four radar-controlled 4.5 in guns in twin mountings situated forward, and two Seacat close-range guided weapon systems fitted abaft the after funnel. For anti-submarine work the ship is fitted with the latest underwater detection equipment and a Westland Wessex helicopter carrying dipping sonar and homing torpedoes. The propulsion machinery consists of two sets of geared steam turbines for normal steaming conditions, with gas turbines to provide additional boost for high speeds and for getting quickly under-way in harbour.



PROFILE

The English Electric Lightning

DOUBTLESS the last of the line of high-speed fighters developed for the defence of the United Kingdom, the Lightning—in the style of such famous designs as the Fury, Hurricane, Spitfire, Meteor and Hunter—has an incredibly superior performance to that of its immediate predecessors. Ten years ago the Meteor, in the main, equipped Fighter Command; ten years before the Spitfire was its mainstay. Whereas the Spitfire of 1943 had a top speed approaching 400 mph, the Lightning travels at about four times this speed and, with its sophisticated equipment, can find its quarry and destroy it with certainty from afar. To reach the enemy it can clamber away at six times the rate of the Spitfire. Such is the progress in fighter development during the last two decades. Whilst the allure of the colourful biplanes of the pre-war days is but a stored memory, model makers and other enthusiasts should be pleased to find that the Lightning squadrons have managed to make their aircraft universally attractive.

First requirement

A requirement for a single-seat high-speed flight research aircraft was first issued in 1947 and to this need, eventually specified as ER103, the Fairey FD2 was produced. English Electric submitted ideas which culminated in a design large enough for eventual development as a fighter, and known as the P1. The Air Staff had, meanwhile, listed their requirements for a very high-speed twin-engined fighter under Specification F23/49, and to this need

English Electric redesigned the P1 project.

To explore the low-speed handling qualities of the P1A, a special machine was built, the Short SB5 WG768, first flown on December 2 1952. Her wings were progressively tested at sweepbacks of 50, 60 and 69 degrees, and her tailplane fitted in varying positions. From these results it was deduced that a 60 degree wing sweep-back and a low set tailplane were best, and these are features of the Lightning.

Extensive flight trials

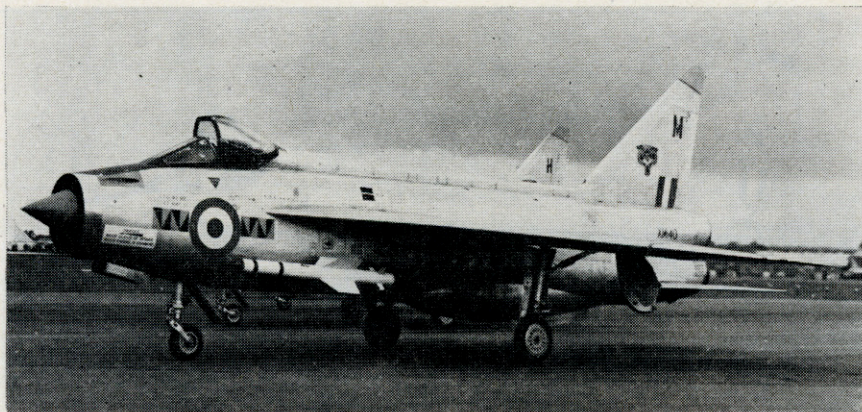
The first P1A high-speed research aircraft, WG760, was flown initially on April 8 1954, from Boscombe Down. Like the second machine to fly, WG763, she was powered by two Armstrong-Siddeley Sapphire engines. On her second flight she exceeded Mach 1. WG763 had two 30mm Aden cannon in her nose, and was the third P1A airframe, the second being set aside for static tests. The two P1As were used for extensive flight trials by the manufacturers and the Ministry of Aviation.

Conversion of the P1A into a fighter called for major design alterations. This new variant, the PIB, was planned as the first British fighter to have a complete weapons system which integrated armament, navigation aids, radar guidance and fire control. Conversion to the fighter role meant alterations to almost the whole of the P1, and in particular the nose showed a major change in shape. Over 50 per cent more power was made available by the installation of Rolls-Royce Avon engines, fitted with after-burners. Three PIB prototypes were ordered in 1953 as XA847, XA853 and XA856. The first flew on April 4 1957 and the third was, for a while, with Rolls-Royce for engine development work.

Long-range tank

At one time it was envisaged that a Napier Scorpion rocket motor would be installed under the rear fuselage, in a large tank-like structure. Advances in armament made this unnecessary and the ventral bulge was utilised as a long-range tank, which was later fitted to WG763 and XA847, and has become a standard feature on the Lightning. At the last SBAC Show, a model of the Lightning was displayed carrying a ventral tank extended to embrace the forward weapons pack. The front and rear of this tank would have fuel and the centre would carry a variety of weapons.

Because of the complex equipment to be carried in the PIB it was decided to order 20 pre-production aircraft. Each of these was earmarked for the development of particular items of equipment. The first XG307 flew on April 3 1958, and all were



A Lightning 1, XM140, of 74 Sqn in her original colours (above) and a year later (below) with black trim for her Farnborough display.

flying by the end of 1959, by which time the aircraft had been officially named Lightning, a title given in the Autumn of 1958.

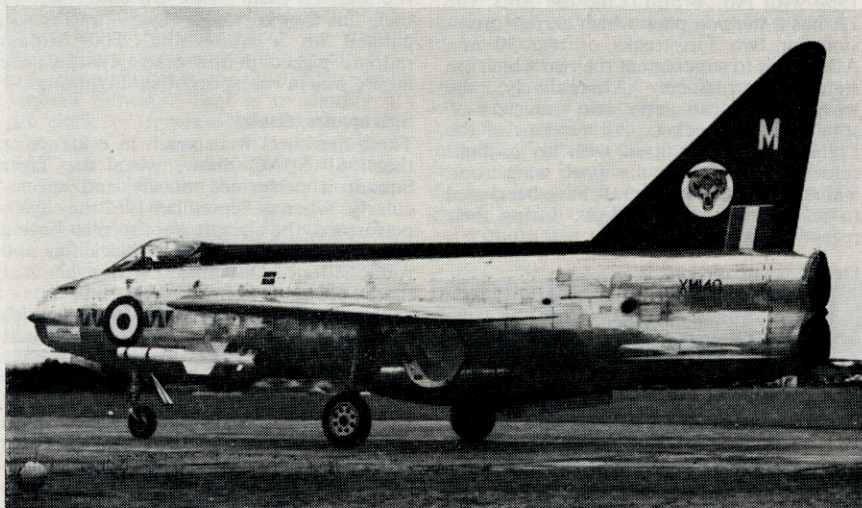
On XG309 30 per cent extra tail area was provided, resulting in a taller fin and rudder, and this improved the handling qualities of the aircraft. Many of the XG pre-production aircraft found their way to the Aeroplane and Armament Experimental Establishment at Boscombe Down, and several were used by the Air Fighting Development Squadron, these being the first to operate with any Royal Air Force squadron. It was one of the AFDS aircraft that figured in an accident on March 5

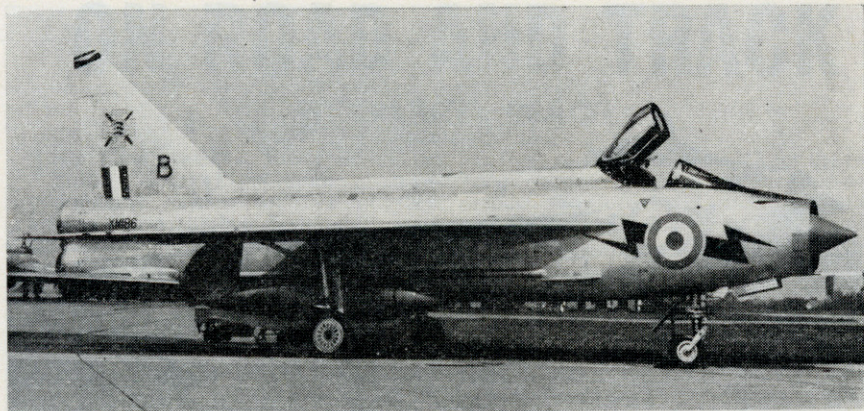
1960, when a Lightning crashed in the mud off Wells-next-the-Sea.

In November 1956 the first large production order was placed for Lightning F1s. XM134, the first production machine, first flew on October 30 1959. Early production machines were delivered to the AFDS, and then came deliveries to a front-line squadron as related later.

A two-seater version of the Lightning was designed as the P11 and a production order placed in July 1958 for what subsequently became known as the Lightning T4. XL628, the first prototype, flew on May 6 1959 and a second prototype was XL629. The trainer Lightning carries the same armament as the fighter Mk1, but has a modified nose to accommodate the two-

Continued on next page





PROFILE—Continued

man crew side-by-side. A production Mk4, XM974, was shown at the 1961 SBAC Show. This version is used by the Lightning Conversion Squadron at Middleton-St-George, as well as by the Lightning squadrons. A further development is the Lightning T5, a two-seater trainer with duplicated attack sights and with a tactical capability corresponding to later fighter versions of the Lightning. XM967, the first example, was flown initially from Filton on March 29 1962.

During the construction of the first batch of Lightnings production was switched to the FMk1A, with refinements which include a long stripe on either side of the fuselage, as faithfully featured on the Airfix model. The Mk1A entered service at the end of 1960 with No 56 Sqn. Like the Mk1, the 1A has a weapon pack which carries provision for two Firestreaks or two 30 mm Aden guns to supplement the two which are standard armament. Alternatively, the weapon pack can carry two canisters of spin stabilised rockets. All versions of the Lightning can be fitted with an in-flight refuelling probe on the port wing root. Valiant BK1 tanker aircraft have been used to refuel Lightnings in flight during their recent visits overseas.

Development aircraft

A further development of the Lightning is the F2, which externally resembles the Mk1A. A photograph of a Mk2, XN723, has been published, but no further details have as yet been released. Some information has, however, been revealed concerning the Lightning F3, for which XG310 is serving as one of the development aircraft, and features a square cut fin tip to its enlarged vertical tail surfaces. The Mk3 is believed to be fitted with Avon 301s and has provi-

A Lightning 1A, XM186, of 111 Sqn. Note the fin marking.

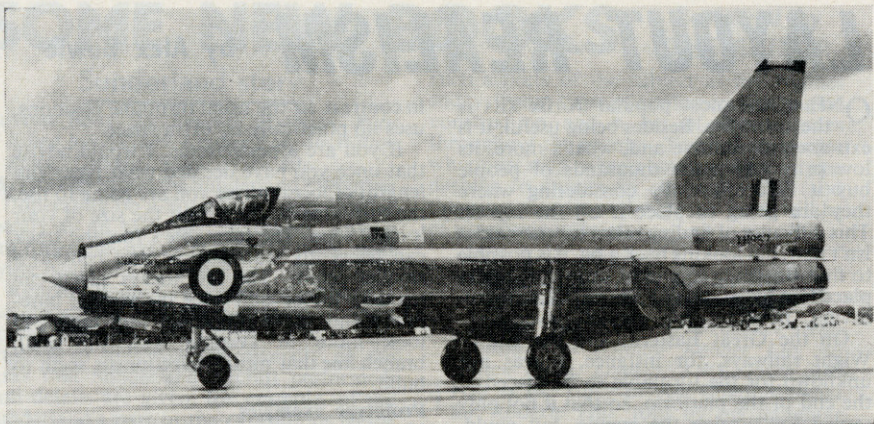
sion for Red Top, a later variant of the Firestreak guided missile. It also carries liquid oxygen, has advanced flight instrumentation and has a steerable nosewheel.

The Airfix model features the F1A, but it can alternatively be built as a Mk1 if the long stripes on the lower fuselage sides are removed. The first operational Lightning squadron, No 74, has used this mark since August 2 1960, when it received the first examples. For the 1960 SBAC Show it mustered four aircraft for a fly past on most days, usually XM142:B, XM141:D, XM164:K and XM140:M. These machines were left in their natural silver finish with black anti-dazzle panels and yellow and black squadron markings flanking the roundels on their noses. On either side of their fins they carried a tiger's head motif, painted on a white disc. The Airpass radome placed in the centre of the nose intake was fawn, as on other Lightnings.

Spectacular display

These markings were much in evidence at the 1961 SBAC Show, when the Tiger Squadron performed noisily and spectacularly. When in September 1962 they again performed, the aircraft were seen to have a black spine to the fuselage, black fins and rudders. Individual aircraft letters, black at first, were now white.

No 56 Sqn, equipment of which with Lightnings began at the end of 1958, uses Mk1As. On their noses these aircraft have red and white checks flanking the roundel and outlined by a very narrow pale blue line. On their fins, 56's aircraft have carried a pale blue disc, upon which is painted a yellow phoenix rising from a red fire, as featured in the squadron's crest. More recently, some aircraft have had their tail



crest enlarged. Now that, as 'The Firebirds', 56 Squadron has been selected to provide this year's Fighter Command aerobatic team, the squadron's Lightnings are being repainted with red fuselage spines leading to the canopy from the all-red fin and rudder, red wing and tailplane leading edges, large squadron crests on their fins aft of fin stripes repositioned (and enlarged) placed along the fin leading edge, and have a black individual letter on the fin outlined in white. Examples of 56's aircraft in the old markings are XM172:S, XM182:P and XM177:N. The latter, now lettered 'G', is one of those already adorned with red trim.

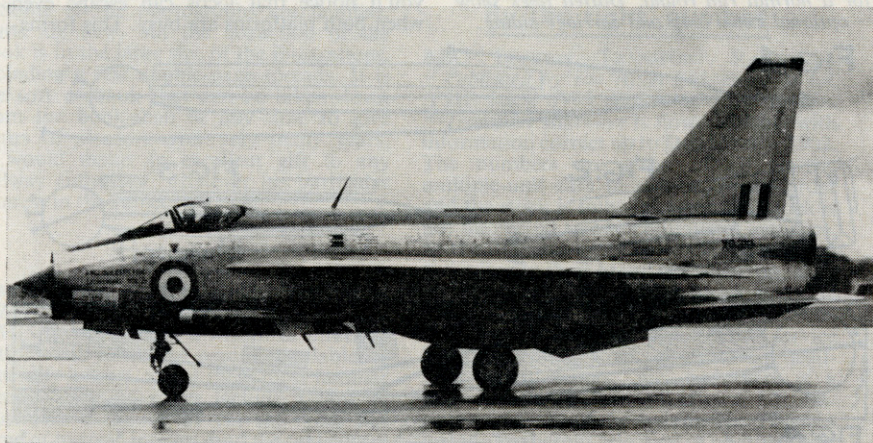
Another squadron using Lightning A1s is No 111, whose markings the Airfix kit provides. Re-arrangement of the transfers in the kit offers a possibility of XM216:P of 111 Sqn; another easily produced is XG310, a pre-production aircraft revised to the Mk 3 configuration.

The prototype Mk 5, XM967, with a tail shaped like that of the Mk 3, and carrying Red Top.

XM191:H also of 111 Sqn. As supplied, the squadron markings for the fin are incomplete, and need to have superimposed upon them a yellow cross of Jerusalem outlined in red, as depicted on the photograph of XM186 of 111 Sqn. Some points of refinements for models include a very high gloss silver finish to the rim around the nose air intake, also a bright silver fin leading edge and spine. A rim preceding the jet effluxes (which are usually soot black) is also a very highly burnished silver colour.

The Lightning T4s in service are silver and have yellow 'trainer bands', XM971 being an example used by the LCS, and carrying a black 'K' on its fin. Firestreaks on the Lightnings are painted white.

M. J. F. Bowyer



LAYOUT REALISM

by Alex Bowie

ONE of the most popular Airfix kits is the turntable. Besides being useful, it is extremely decorative and, what's more, its low price has made thousands of people buy it before actually considering where they are going to place it on the layout. This difficulty of finding room for turntables isn't new, but looking back a bit, it is possible to find British examples of prototype tables placed in what would be an ideal space-saving position for model layouts.

On the Great Eastern, and the Isle of Wight railways, for instance, it was not unknown for the turntable to be placed at the end of the platform, so that it not only served for turning the engine, but could, on a model layout, be used to save a pair of expensive points. Thus, for three bob and a little crafty work with a tube of polystyrene, you can build a combined turntable and run-round, with the knowledge that, although this kind of equipment would be rare in prototype, it could still be regarded as authentic.

Furthermore, it can be placed in an accessible position for hand operation and,

in contrast to the usual turntable positions, uses up practically no extra space.

If you are a perfectionist I would advise that once you have decided what type (and length) of locomotives you are going to use, the turntable be cut to suit the size of your longest loco. The turntable's running track can be gently warmed, cut and bent to a smaller radius. The few inches saved can make a lot of difference on a small base-board and, more important, your table will look more in keeping with the small branch line that most perfectionists seem to build.

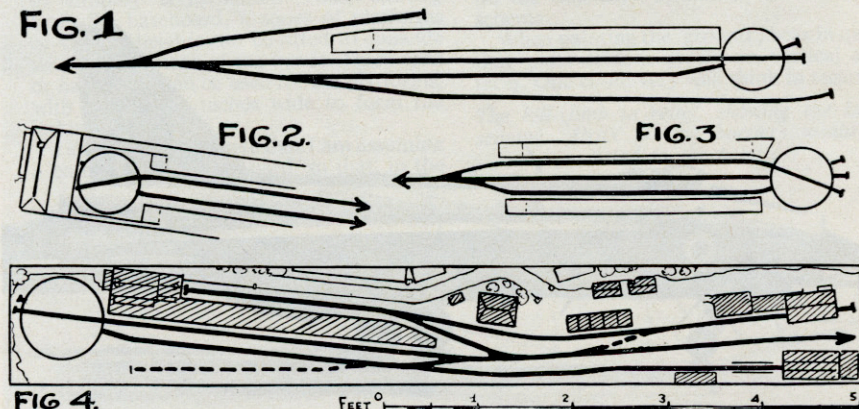
Prototype examples

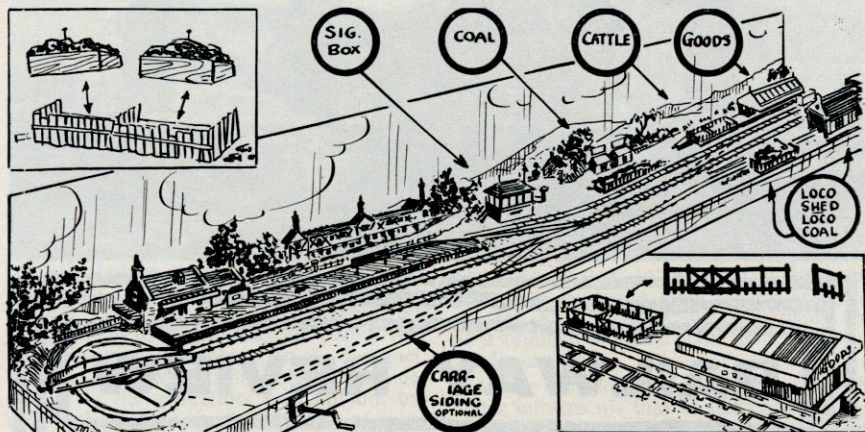
Now let's take a look at the first three plans. Figure 1 is of Bembridge, Isle of Wight, railway. You will see here that there is a very simple *prototype* station with only three points, which nevertheless handled a considerable amount of passenger traffic. It is now closed, in line with the modern policy of crowding more bus and freight traffic on to our already overworked roads.

It would make a good prototype for the chap who must keep down costs, though personally I'd hate to keep swivelling that turntable around to allow for freight wagon sorting, unless it was either motor operated or worked by a remote crank handle and gears.

Figure 2 is an ex-GER specimen, and you'll notice here that there are two physically separate platforms with a station building at the end. Figure 3 is interesting, and is from a layout featured in the 'Model Railway Constructor' some time ago. This would suit a busy passenger station, for you'll notice that locos can escape even when both platforms are busy. This forma-

Figs 1, 2 and 3: These are the layouts mentioned in the text. No attempt has been made to give accurate representations of the complete stations—the sketches merely illustrate the positioning of the turntable. Fig. 4: A model station layout following the same theme. It can be seen that besides solving a space problem, this positioning of the turntable also saves two sets of points, ie the points which lead to a normally positioned table, plus at least one essential for a normal run round. Dotted lines show optional extra loop and carriage siding.





tion isn't as space-saving as the others, but is still worth considering.

Both the Great Eastern and the IOW railways had to be very economy-minded, and their ideas were often less ambitious than other railways. In this respect, I must repeat what I've said before. In spite of the purists and super-purists, there *must* be a certain amount of modeller's licence in most railway modelling. This is particularly so where space and money are short.

It is nice to know, therefore, that some *prototype* engineers also realised that you can't have Clapham Junction ideas on a Bembridge income, and accordingly indulged in practices which looked suspiciously like modeller's licence. Yet in these prototype examples, although the station layouts may have been built with space and economy in mind, the results are quite attractive.

A model layout

Now look at Figure 4. This shows a small station layout, designed to give the maximum effect in a small space, with simple equipment. It is designed with the impecunious in mind. Not only that, the layout takes into account something which should not be overlooked. Each part is easy to see when operating, and all are accessible, and easily reached without having valuable buildings and equipment knocked about by groping hands.

The station building can be to your choice, but personally I prefer using the Norman church kit, an old favourite which can be cut up in a dozen different ways, and still remain a building with personality. It would not be advisable to make the building too long, because this shortens the bay, and though modellers generally use this bay for a push-pull or other short passenger train,

Pictorial view of the layout with a few constructional ideas.

a little extra length can sometimes be useful.

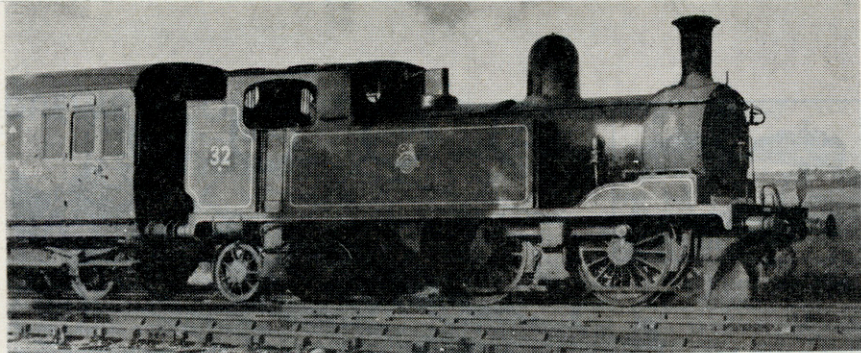
A shed isn't even necessary, but let's not be too cheese-paring. In these days of cheap realistic equipment, even the average chap has far more locos than his small shed can accommodate. But a tiny one-loco shed gives the right branch atmosphere, where somehow a large shed seems out of place. You'll note I've placed one almost at the opposite end of the layout, so that there won't be too many buildings crowded together next to the turntable.

A few constructional tips

For a similar reason the goods shed and cattle dock are placed away at the back. Thus the whole effect will be fairly open and uncluttered. It is vitally important to make this effort for uncluttered appearance in a small and narrow baseboard, but the result will not strain credibility half so much as where buildings, track and locos fight each other for breathing space.

The goods shed can be of the partially open type, using the canopy kit, or can be adapted from the loco shed. The cattle dock can be very simply built up, using a few lengths of fencing. With some careful work, station fencing can be used to give an effect rather similar to that shown in the sketch.

Coal staithes are easy to make from strips of card or plastic filled with imitation coal. And here I would voice my approval of the chap who once said that the best imitation coal is made from real coal. Just wrap a small-sized prototype lump in an old rag and give it a full-sized bash with a hammer. The resultant chips can be glued on the top of a block of wood and popped into the staithes.



RAILWAY REVIEW

BY NORMAN SIMMONS

RAILWAY review would be incomplete this month without mentioning the Beeching Report, published on March 27. Nearly everyone will be affected one way or another should the Report be implemented. Our railway system has been in existence, much as we know it today, since before any of us were born. To subject it suddenly to the cold science of an economic exercise is bound to unfold some unpalatable financial truths.

By applying the yardstick of profit and annual turnover, an economist can—at least in theory—decide what service to retain and what to close to result in an overall profit. It is, however, my own opinion that the last word should not be left to an economist. At least some thought should be given to the population and well-being of the country as a whole, if the ugly problems of depopulation of the countryside, over-centralisation of a few big cities, and over-crowded roads, are not to be with us for ever.

Regional changes

In the March issue I referred to the published list of locomotive transfers resulting from the Western, Southern and Midland Region boundary changes. Further details have since been released to show that over 80 former Southern Railway locomotives have been transferred to the WR, including seven Merchant Navies and 37 West Country and Battle of Britain.

Another interesting feature of the boundary changes is that BR's only narrow gauge locomotives, the Vale of Rheidol engines Nos 7, 8 and 9, are now under Midland Region control. Incidentally, this

line is shown as remaining in regular service on all the maps published in connection with the Beeching Report. The former Cambrian main line from Pwllheli to Aberystwyth and inland to Shrewsbury, now under LMR control, is also to remain intact.

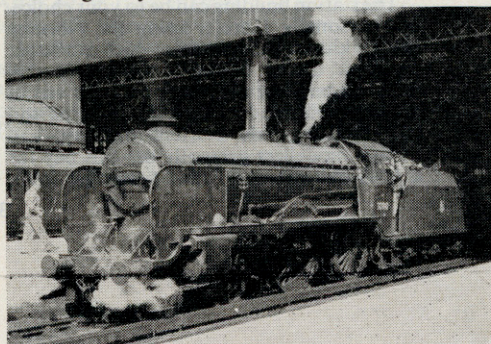
LT Victoria line tube

Recent contracts announced by LT for work on the Victoria line tube include over half a million pounds for tunnelling shields and over one million pounds for station and tunnelling works to be carried out at Highbury and Victoria.

The tunnelling shields include hydraulically-operated rotary cutters and rams to move the shield forward. It is expected that tunnelling will progress at a speed of three feet per hour, with tunnel lining segments fixed every two feet.

The station work at Victoria, the terminus of the new line, involves the construction of stairs, subways and a shaft for a bank of two escalators to connect with the District line platforms. Further contracts will be placed to cover the construction of the Victoria line terminal station and the sub-surface ticket hall which will be beneath the bus station.

At Highbury station, southbound trains



Left: *The Beeching Report* recommends closure of all remaining rail services in the Isle of Wight. No 32 Bonchurch is typical of the locomotives maintaining the service on this system. Right: A Brush type 4 under construction. Twenty of these locomotives are currently being built for BR—Locomotive notes reports delivery up to D1513 to the ER.

on the Victoria line will use the present northbound Northern line platform and the Northern line trains will be diverted to the new tunnel, the subject of the latest contract.

BR new look

At the 'New Designs for BR' exhibition held at the Design Centre, London, the British Railways Board displayed many fine examples of the work of their design panel.

Foremost was the scale mock-up of a main line passenger carriage with both open and compartment type seating. The seats in the open carriage were particularly noteworthy, with such features as magazine holders, refreshment trays and provision for storing luggage below the seat.

Also displayed were models showing new liveries for rail and road vehicles. General freight wagons will be bauxite red, refrigerated and insulated wagons will be ice-blue.

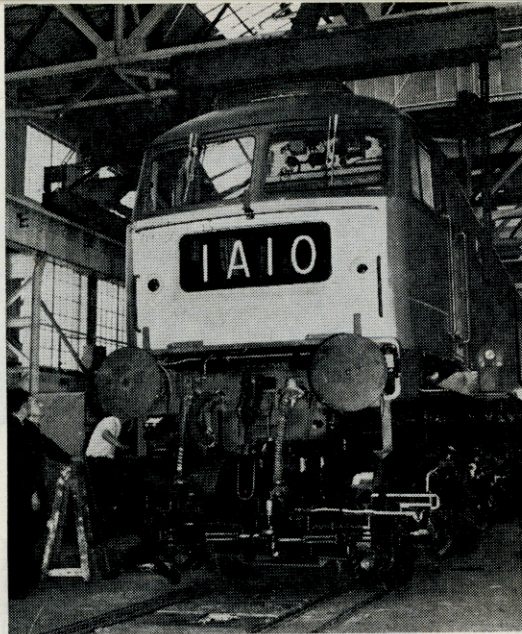
The most controversial exhibits were the new station staff uniforms. Grey is to be the new colour, with medium grey jackets and dark grey trousers for ticket collectors and inspectors, and dark grey jackets and trousers for station masters. Porters will wear dark grey slip-overs with striped fitted sleeves—quite a striking and seemingly practical style.

Welshpool and Llanfair re-opening

A formal re-opening ceremony performed by the Earl of Powis on April 6 marked the restoration of a passenger service on the 2 ft 6 in gauge Welshpool and Llanfair light railway, from Llanfair Caereinion to Castle Caereinion in North Wales. This is the first passenger service for 32 years.

Three trains a day will operate until the end of September over the 4½ miles of re-opened line. Passenger services will be extended to Welshpool as soon as possible, and engineering and other work is now in hand to prepare this section for passenger traffic.

Motive power is provided by the two



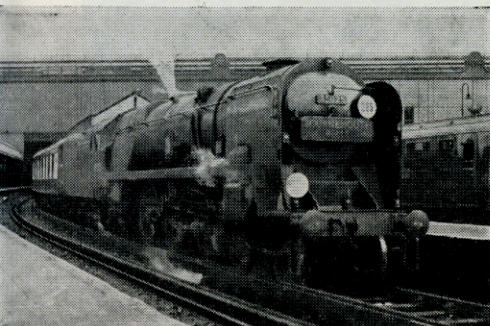
original O-6-O tank locomotives *The Earl* and *Countess*, and an O-4-O diesel tractor.

Great Central Railway

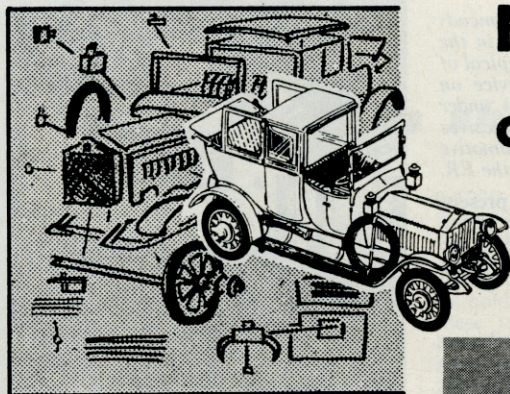
A report early in April referred to a private proposal to lease the former Great Central Railway main line from Aylesbury to Sheffield, and to re-introduce a passenger service. The idea is certainly an exciting one. This well-laid route would make an ideal stamping ground for privately-preserved express passenger locomotives, if these could be used on the line. Could it be that Mr Pegler's *Flying Scotsman* could be joined by *Silver Link*, *Princess Elizabeth*, *Royal Scot* and other locomotives known to be sought for preservation?

Locomotive notes

Reported deliveries of new locomotives are as follows: D1015 *Western Champion*, D1016 *Western Gladiator*, D1047 *Western Lord*, D1050 *Western Ruler*, D1051 *Western Ambassador*, D1052 *Western Viceroy*, D1053 *Western Patriarch*, D1054 *Western Governor*, D1055 *Western Advocate*, D7062, 4-70 to the Western Region; E3073, 5 and 3088 to the London Midland Region; D1506-13, D6805-18 to the Eastern Region; D5182 to the North Eastern Region; and D5177-81, D6790-5 to the Scottish Region.



Ancient and modern at Waterloo. The last Schools was withdrawn recently. Typical of the class, No 30910 Merchant Taylors (left) waits to leave on a Basingstoke semi-fast. Merchant Navy 35025 Brocklebank Line (right) about to set off with the Bournemouth Belle—a regular Pacific duty.



New kits and models

**LATEST PRODUCTS
ON THE MARKET OF
INTEREST TO MODELLERS**

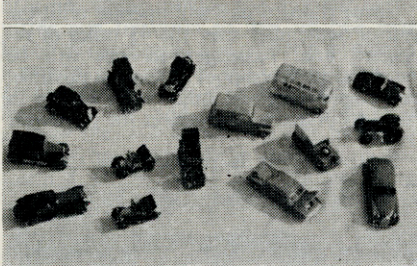
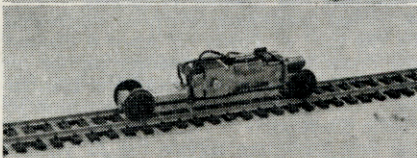
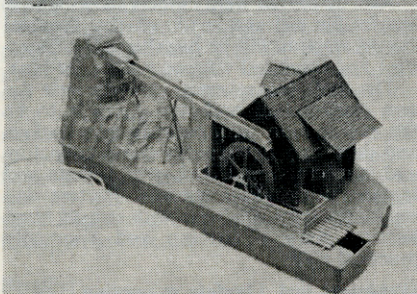
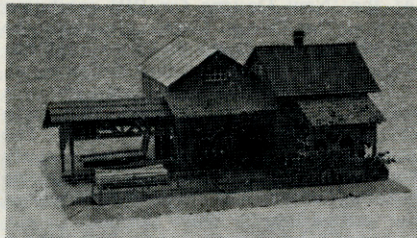
Motorising the Airfix railbus

We have seen many ideas for motorising the Airfix railbus, but one of the best is, without doubt, the motorising kit obtainable from Eames at 24, Tudor Road, Station Hill, Reading. At 21s 3d without motor it does, at first glance, appear a little expensive, but it is a very workmanlike precision job, which has obviously involved Eames in a considerable amount of head scratching and design work.

The cast metal parts of the kit consist of two main chassis members which, with cleverly-interlocking spacers, bolt together by four 10 BA brass nuts and screws to form a most rigid and weighty chassis. The insulated metal wheels are supplied already assembled on neat 3/32 inch square metal bushes, which fit into slots in the frame. The trailing axle has a certain amount of vertical movement to take up irregularities in the track, but the driven axle, which is assembled to include the worm gear wheel, is a rigid fit.

The kit is designed to take the Tri-ang XO4 motor, which can be purchased from most Tri-ang agents or direct from Eames of Reading at a further cost of 12s 10d. The motor is bolted to the chassis by two 10 BA screws and nuts and provision is made for adjustment to obtain perfect meshing of the gears. The pick-up gear and wiring harness is ready assembled and includes a suppressor. Care is needed to ensure that the soldered joints on the pick-up gear do not short on the frame and, ideally, some additional insulation is required at these points.

Only slight modification of the Airfix railbus is required to complete the model. Two sizeable portions of the under-frame have to be removed, but otherwise



Top to bottom: *Faller working saw mill and water mill; Eames motorising kit for the Airfix railbus; a selection of HO/OO scale Spanish Angulas models.*

few deviations from the Airfix instructions are required. Very little of the motor appears above the floor line inside the railbus, and the appearance of the model is not spoilt in any way.

The instructions are very concise, clear and easy to follow and no difficulty was experienced during construction. Anyone capable of making the Airfix railbus should be able to motorise it successfully using this kit and we can recommend it as a practical proposition. *N.S.*

Two working mills

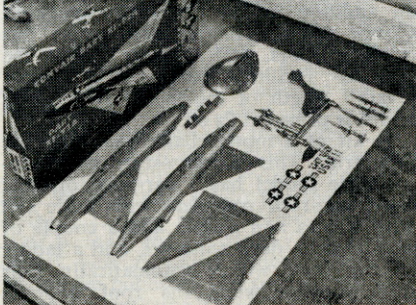
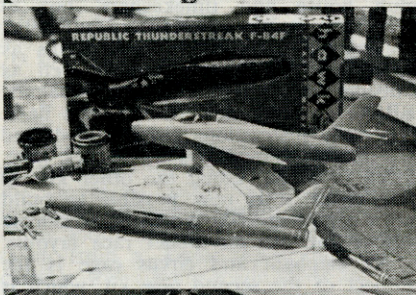
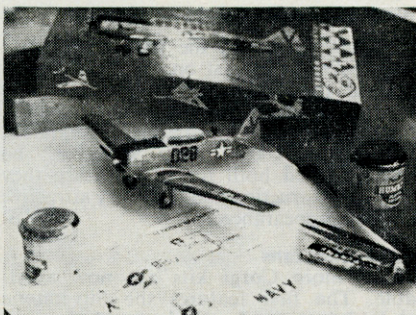
Two more of the excellent Faller range of lineside building kits have been submitted for review by BMW Models, and are illustrated this month. Both kits include working features that add considerably to their interest and make them fascinating scenic additions to a OO or HO gauge model railway.

The working model water mill, which comes in kit form at 28s 11d, has, in our judgment, the best working feature. The model includes a water wheel, propelled by water pumped from the $\frac{3}{4}$ inch deep watertight tray base. The pump is installed in the 'mountain' from which the water trickles to run down a chute to the water wheel. The pump works on alternating current of 8-20 volts and, apart from topping up the water supply to replace that lost by evaporation, the model looks after itself. We found a drop of wetting agent helped to provide a more even and realistic flow of water.

There is scope for ingenuity in installing the model in a scenic layout as, ideally, it should fuse in with the landscape, but at the same time be readily detachable for maintenance purposes. The glorious illustration on the box lid, and in the instructions, shows what can be done in this direction.

Both these Faller models have a realistic and tumble-down appearance, typical of the buildings they represent. The second kit, the timber mill, excels in this respect. The half-rotted timbers of some of the sheds and awnings are beautifully portrayed. There are also planks of timber, tree trunks and sawn logs to scatter around the yard to give a very realistic effect. The model is illuminated and the working features of the kit are an electrically-driven water wheel and a reciprocating vertical saw. This latter feature makes a terrible clatter, which is realistic but is likely to be a little nerve-wracking if allowed to carry on too long! The kit costs 42s 6d.

Features common to both kits are their beautiful multi-coloured plastic parts.



This trio of Hawk kits (NA SNJ Harvard, F-84F Thunderstreak and Convair XF-92A) was reviewed in last month's issue.

Definitely no painting is necessary. But a few deft touches with the paint brush might just add a little more realism in one to two places, and a sprinkling of coloured saw dust, lichen and other such scenic modelling aids would add the finishing touch. Otherwise the kits are complete.

The absence of English language instructions in the timber mill kit caused a bit of a headache, especially as the illustrations on the instruction sheet did not appear to follow any particular sequence. The water mill did, however, have English instructions and they helped considerably. We can't understand why

Continued on next page

New kits and models—Continued

Faller don't mould the part number on each part, or at least on the plastic stem. Instead they rely on illustration in the instruction sheet, which can become a little complicated in the larger models. Both these kits can, however, be recommended both for the pleasure they give in construction and their very attractive finished appearance. N.S.

For racing fans

Three more Corgi kits are now available. The first features the Silverstone club house and timekeepers' box at Woodcote corner. Completely authentic, the model has such interior details as telephones and typewriters, as well as outside fittings such as loudspeakers, BRDC emblem, flower-boxes and flags. Assembly instructions are included, and the made-up model is $7\frac{1}{2}$ inches long. Price is 6s 6d. Using the other kits in this series, it is now possible to build up a complete scale model of Woodcote corner for use on model race layouts.

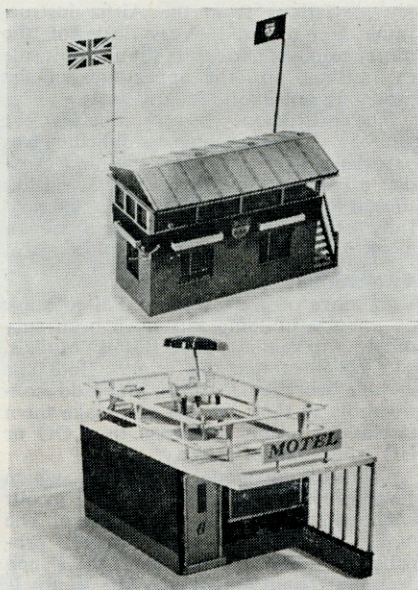
An elephant and circus cage is the subject of the second new kit, which is an addition to the Corgi Chipperfield's Circus series. The finished model has opening doors, and a lifting eye in the roof to facilitate handling by crane. Overall length of the model is 3 inches and it is priced at 2s 6d.

A kit of a motel chalet completes the new trio. This modern-style simple-to-assemble model has a car-port, opening door, sun-roof complete with table (set with bottles and glasses and a couple of easy chairs), deep windows, and a ladder to the roof which automatically falls into position when the roof door is opened. A colourful striped parasol shades the miniature residents from the sun. Price of this $5\frac{1}{2}$ -inch-long model is 3s 11d. D.R.

Monogram trio

When I first heard that Monogram were to produce kits of a Spitfire, Me 109 and Zero, my immediate reaction was, oh no, not another one, as the trend today seems to be that any manufacturer just hasn't 'arrived' until his company has produced an example of one, or all, of these three aircraft. I need not have worried, for when the kits arrived I was extremely pleased to find that they were accurate and well thought-out models, all in true quarter scale, which I am sure the enthusiast for this scale will want to add to his collection.

The new Monogram trio are all excellent models. They are really beauti-



Two new Corgi kits—the Silverstone timekeepers' box (top) and motel chalet.

fully made and lack the gimmicks (apart from retracting undercarriages) which the previous models, such as the Avenger and Wildcat, featured in this range.

I found the Spitfire the most satisfying to construct, possibly because I hadn't made one up for some time, and it was a great pleasure to put the various bits and pieces together. The actual model is of a Mark IX coded FY:A of No 611 Squadron and having the serial BS435. Reference to Bruce Robertson's 'Spitfire—the story of a famous fighter' will provide any number of good camouflage schemes and variations in markings, apart from information on suitable modifications that could be made. It is worthy of note that on this particular point I found fault with Monogram's otherwise excellent model, as the suggestions for painting the kit and the actual marking supplied are incorrect.

It seems a common fault with manufacturers that they do not always pay sufficient attention to the details on the transfer sheets. Why, for example, do we always have to have white code letters instead of the correct colour 'sky'? Both the rear fuselage band and the code letters on the Monogram model are white, but these can, of course, be changed by the model maker wishing to make a kit which is completely accurate

in every detail. The Monogram Spitfire has 30 parts, moulded in two colours, grey and silver.

The next model to be made up was the Messerschmitt Bf 109E and, apart from the lack of a swastika marking for the fin and rudder, there is very little one can say in criticism. It is a top-rate model, fully detailed and authentic in every way. The kit features 26 parts, not including the transfer sheet.

The best of the bunch was, without doubt, the Mitsubishi A6M5 Zero, as it is far and away the most accurate representation we have yet had of this aircraft in any scale. The construction, too, is worthy of very high marks and I was particularly impressed by the neat and effective way in which the engine mounting, its cowling and propeller ingeniously fitted together. With the larger scale it has been possible to provide Japanese characters for part of the marking scheme, and the instruction sheet tells the modeller that this particular model was based on a Zero which was left natural metal finish all over. The only thing that foxed me was which way up the Japanese letters should read, as there's no indication on the box illustration or in the instruction sheet. There are 28 parts in this kit, moulded in black and silver plastic.

A special mention should be made about the undercarriages on these three kits as, apart from being the only gimmick, they do present the most difficult problem in the actual construction. I had to make up my versions in a hurry, in order to catch this month's copy date, and consequently this didn't leave time for the adhesive to fully set in the joint between the undercarriage leg and the wing. Naturally, it broke off when I came to extend the moveable parts, so take a word of warning from my mistake—leave the undercarriage assembly overnight before attempting to handle it!

All these kits sell at 11s 6d. Our samples were supplied by BMW Models, of Wimbledon, who have stocks. *A.W.H.*

American liveries for OOO gauge range

Lone Star Products have introduced their OOO gauge F7 diesel locomotive in three different American liveries. In addition to the yellow 'Union Pacific' livery, there is now the blue, silver and yellow 'Chesapeake and Ohio', the red, black and yellow 'Kansas City Southern' and the orange, black, white and silver 'New Haven'. All sell for 35s each.

To support these new locomotives, the Transcontinental passenger and Vista

Dome coaches are also available in the 'Pulman' and 'New Haven' liveries from 5s 11d to 6s 6d. Goods rolling stock has also been introduced in the various liveries to give a selection of 13 different American goods stock ranging in price from 4s 11d to 5s 6d each.

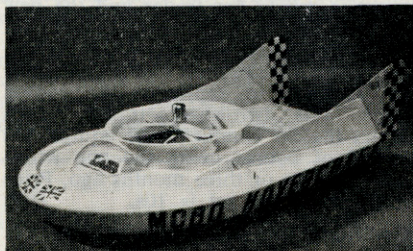
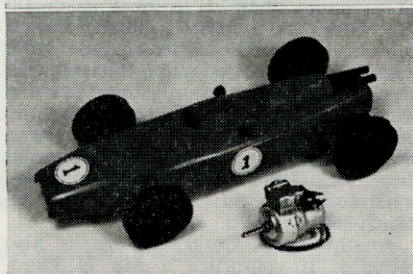
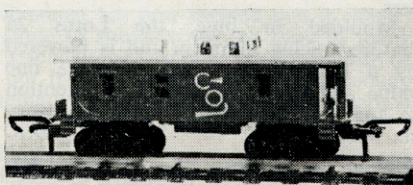
One of our pictures this month shows the new Lone Star 'Chesapeake and Ohio' caboose. It is finished in blue livery, with a silver roof and the printing is yellow on both sides. It is twin-bogied and has automatic couplings. The latest nylon wheels with pin-point bearings are fitted to ensure free-running.

A complete list of the new Transcontinental models, together with the many other new 1963 additions to the Treble-O-Letric series is obtainable from Lone Star Products, 152 Green Lanes, London, N13. *D.R.*

New 1:72 scale aircraft series

A new Revell series of nine 1:72 scale aircraft kits, all selling for 2s 11d each,

Continued on next page



Top to bottom: Lone Star 'Chesapeake and Ohio' caboose; Scalecraft Lotus 25; Mobo Hovercraft.

New kits and models—Continued

is scheduled to appear during the coming months. The first three to be available are the Spitfire, the Messerschmitt Bf 109E and the P-47D Thunderbolt—all of which are now in the shops. We hope to be able to publish detailed reviews of the models in the series in future issues. D.R.

A new model every six weeks

Scalecraft Ltd have now released two more electric-powered plastic car kits—a breakdown truck and a Lotus 25 racing car. It will be recalled that these kits, which sell for only 5s, are supplied complete with an electric motor and can be assembled without adhesive.

The breakdown truck, complete with towing crane, is powered by a U11 battery (which costs 5d), and this larger battery gives both longer life and increased towing power. The kit is moulded in yellow polythene with black accessories and is complete with AA transfers.

Moulded in blue, the Lotus 25 features racing numbers and is powered by a U12 battery. Both kits are fine value and it is this company's intention to add a new model to the series every six weeks. D.R.

Anyone for an ice?

The Corgi Toys range continues to grow. This month there is a new ice-cream van, based on a Smith's 'Mister Softie' vehicle. It features an ice-cream vendor who can be rotated from beneath the chassis to serve from either opening window. The interior of the van is fully detailed and has a driver's seat, steering wheel, ice-box, counter, and ice-cream dispenser. Glidamatic suspension is another feature of this 3½-inch-long model, which sells at 6s 4d.

Another new Corgi gift set is also released. It comprises a Mk II Land-Rover, a racing car trailer and the new Ferrari Formula 1 racing car. The Land-Rover has seats, steering wheel, Glidamatic spring suspension and a removable tilt moulded to represent the canvas cover. The two-wheel trailer which carries the car completes the equipte, the Ferrari of course being the one which appeared two or three months ago. Price of this new gift set is 10s. D.R.

Working Hovercraft

A working model Hovercraft, realistically moulded in vacuum-formed plastic and powered by a glow plug motor, has been added to the Mobo range. It is



Top to bottom: Solido Alfa Romeo 2600 and Abarth 1000; Corgi 'Mister Softie' ice cream van; Matchbox Zephyr and Victor estate car.

available in kit form (excluding engine and battery) for £2 2s, or as a made-up model (including motor) for £7 5s.

The kit contains fully illustrated instructions and all the necessary parts for quick assembly, including airscrew, cement and transfers. When completed the model rides on a cushion of air and simulates exactly the movement of the real thing. It performs equally well over land and water, and will work with any glow plug motor of .8 cc capacity. Recommended motors are the Cobra, AM 049 and Frog 049. D.R.

Latest from France

Two fine new French Solido 1:43 scale die-cast models are now available from Auto-Models Ltd, of 70 Finsbury Pavement, London, EC2, who have now been officially appointed sole importers and distributors for this range, and for the Danish Tekno series.

The latest arrivals from Solido are the
Continued on page 388

Readers write . .

LETTERS TO THE EDITOR

Praise for the 'Warspite'

Having bought the Airfix HMS *Warspite*, I was delighted to notice the detailed sea-planes. Their propellers, floats, trolleys, even their housings, helped to add realism to this 'Grand Old Lady'. Like the model German ship *Bismark*, of which I am also a proud owner, the *Warspite's* guns and cranes rotate and elevate independently. The launches and lifeboats are to the same high Airfix standard. I did, however, think some decals would have helped this kit a great deal.

By painting all details, such as portholes, life-rafts, winches, anchor chains, capstans, etc, with a small toothpick or sliver of wood, and touching the hull with orange paint to simulate rust, authenticity was achieved.

My suggestion for a future model ship is an attack transport or 'Q' ship, as I am sure these were just as important as the *Warspite*, or the range of other famous Airfix ships.

QUENTIN MCLAREN,
Galashiels, Selkirkshire.

Question and answer

In the April 1961 issue of AIRFIX MAGAZINE, Profile was devoted to the Hawker Hunter. I am making a model of the Hunter which I am going to finish as a Mk 9 (FGA) and I want to paint it in No 20 squadron markings. I know the nose markings, but I do not know the colours or the motif. Please can you help me?

I would also like the markings and colours of Nos 1 and 34 squadrons.

C. PRITCHARD, Llanelly, S Wales.

Mike Bowyer comments: 'The Hunter 9s of 20 Sqn carry narrow red-white-green horizontal stripes on their noses, flanked at the top and bottom by wider blue stripes. The motif in the centre is a black bird of prey on a white disc. Prior to its establishment in the Far East No 20 Sqn flew Hunter 6s in the 2nd TAF. These carried the same style of striping flanking the fuselage roundels, and a yellow fin letter, eg XJ680 was A. The individual letter appeared in black on the nose-wheel door. Two Mk 9s of 20 Sqn are XF508:D and XK136:O.

'No 1 Sqn carries a white arrow shape to either side of a golden winged 1 on the nose of its aircraft. The arrow shape is outlined in red. XG130:E of the squadron carries a white fin letter outlined in red.

'No 34 Sqn used Hunter 5s, including WP184:A and WN970:L. These had the squadron's arrowhead flash on their noses, a red outline enclosing black and yellow

LETTERS to the Editor can only be answered in the magazine. However, we are always pleased to receive your comments and pictures, which will be considered for publication. Readers whose letters are published each receive a free Airfix kit of their choice. Submitted material and pictures can only be returned if accompanied by a stamped addressed envelope, and the Editor cannot accept responsibility for safe keeping of any such contributions, neither does he necessarily agree with comments expressed by correspondents in the letters column.

squares. A white disc carried a golden-yellow moon placed behind a black wolf. The two aircraft referred to had black nosewheel doors with yellow individual letters upon them. The fin letter was yellow. WP136:N, similarly attired, had in addition the special stripes added for operations against Egypt in November 1956.'

Take a gamble!

It seems to me that in the plastic modelling business there is a scandalous lack of army models in larger scale. The only 'large scale' German army vehicle I can find for the second world war is Aurora's 1:48 scale Panzer tank. No second world war British tanks are represented in 1:32, 1:40 or even 1:48 scale. A variety of unique vehicles, from the French AMX 13 tank to the Bundeswehr's new personnel carriers, are known only in OO/HO scale. There is a validity for large scale plastic kits that does not exist in the plane-train-car lines; that is, many thousands of people collect standard-sized soldiers 54 mm high. Army vehicles in the right scale would be of interest to them.

I suppose some model manufacturers might say that research indicates that army models aren't popular. Research can be treacherous, of course. One of the world's most exhaustive research schemes produced the late, unlamented Edsel car. Won't some manufacturer take a gamble on military vehicles?

H. R. W. MORRISON, Ontario, Canada.

Halifax variations

Readers of AIRFIX MAGAZINE may find a few details about the subject of the Halifax kit of interest, as this particular aircraft offers a simple variation in markings.

My records show that it was delivered to 158 Squadron in March, 1944, and began operations on the night of March 15/16. The Squadron was part of a force despatched against Stuttgart, but unfortunately LV917 was forced to return early with a radio fault. At this time its individual letter

Continued on next page

Readers write—Continued

was 'H', and it carried this until mid-January, 1945, when it changed to 'C' as depicted by the kit.

For those who would like to vary the markings further the following list provides a selection of 158 Squadron markings which still allows the use of most of the transfers in the kit. All are BMk IIIs and were with the Squadron at the same time as LV917.

'D' LV920, 'F' LV907, 'L' LV790, 'R' LV771, 'E' LV792, 'J' LV940, 'P' LV786.

K. A. MERRICK, Hornchurch, Essex.

Dam-buster details

With the recent release of information by Vickers-Armstrong Ltd on the dam-busting bomb, the aeromodeller has at last some substantial facts on which to base his model. It may be of interest to point out that there is in the February 4, 1963, edition of *Flight* an article on the subject, which includes a photograph and diagram of the weapon.

After modifications of the Airfix Lancaster, as explained in your December, 1960, issue, the bomb should make a very neat fit since its dimensions will be 5/6 inches long by 7/10 inches diameter. Timothy Stevens was correct in saying that the production bomb was cylindrical, although its design was originally spherical.

It is puzzling why this weapon remained on the secret list for so long in this nuclear age.

CHRISTOPHER DARWIN, Ealing, London, W13.

Aircraft alternatives

Having read the article on Beaufighter conversions in the February issue of AIRFIX MAGAZINE, I would like to suggest that if an alternative 'thimble nose' section had been included in the basic kit the less skilled kit converter would have been in a much better position as regards building various Beaufighter versions. Such a policy could be applied to the Mosquito kit, for the Mk VI could easily be converted into either the BMkIV or NF XII.

Some time ago I saw an AIRFIX MAGAZINE which dealt with converting the Lancaster into the Dam-Buster variant. Now that details have been released concerning this interesting aircraft, would it be possible to produce either a new Lancaster kit or to produce a kit-converter for the variant already on the market? While on the subject of new kits that could be produced I would suggest that a Griffon-powered Spitfire variant would greatly commend itself to all modellers.

J. F. CHAPMAN, Welling, Kent.

New kits and models—Continued

Alfa Romeo 2600, price 10s 6d, which incorporates sprung suspension, opening doors, Reutter-type folding seats and clutch, brake and accelerator pedals, and an Abarth 1000, complete with sprung suspension, bucket seats and opening doors, selling at 10s. D.R.

Fully-sprung Zephyr

The two latest Matchbox models are a Ford Zephyr 6 and a Vauxhall Victor Estate car. The Zephyr is under 2½ inches long, yet it has independent suspension on all four wheels, the first time this has appeared on a Matchbox model. Other features are seats, steering wheel, a towing hook and windows which are open on the front doors.

The Victor has an opening rear door, and is also equipped with towing hook, seats, steering wheel, and open windows on the front doors. Both these new Matchbox models are 1:71 scale and sell for 1s 9d each. D.R.

Spanish miniatures

A new range of Anguplas Spanish-made 1:86 scale model vehicles is now being imported into this country and should prove popular with both collectors and those seeking a useful way of adding a touch of colourful realism to HO/OO scale (and even TT) model road and rail layouts.

Prices of these extremely well-detailed miniatures range from 1s 9d to 3s 6d each, and they are produced in authentically-coloured plastic. A range of historic cars takes price of place. Selling at 3s 6d each, there is already a choice of a splendid Rolls-Royce Phantom 1; Model T Ford; Hispano Suiza; 5 hp Citroen; Fiat Balilla; 1916 Studebaker 'Big Six'; Fiacre de Berlin Orix; and Le Zebre. Among the fine details on these models are headlamps, windows, steering wheels, starting handles, seats, 'chrome' radiators, and revolving wheels.

Selling for 2s 9d are a Rolls-Royce with windows and 'chrome' bumpers, radiator and headlamps; a Land-Rover with spare wheel; a Jeep; a Ford Galaxie with windows, opening bonnet and boot, and 'chrome' radiator, headlamps, bumpers and engine; and a Mercedes-Benz Microbus. In the 1s 9d range, an open MGA with windscreen, steering wheel, dashboard, seats and gear lever, and a well-detailed tractor are the first arrivals.

The Anguplas catalogue lists many more exciting models, a number of which will be imported shortly. The range is being handled in the country by BMW Models, from where supplies and details are available. D.R.

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